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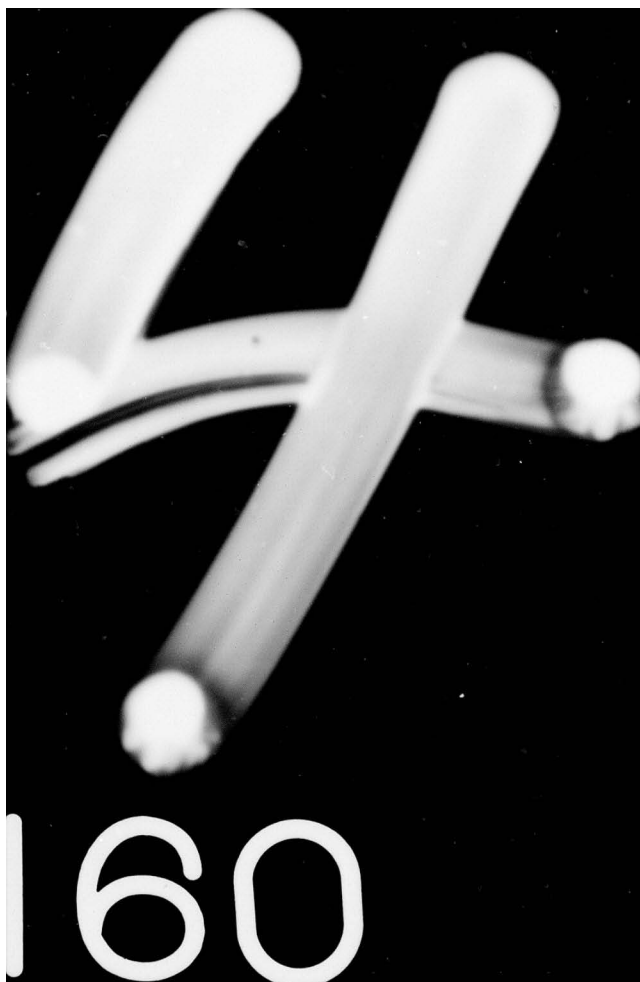
CORPS OF ENGINEERS SAN FRANCISCO CALIF SAN FRANCISCO--ETC F/G 5/1
FINAL ENVIRONMENTAL STATEMENT, HAHN SHOPPING CENTER (MARIN MALL--ETC(U)
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**FINAL
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STATEMENT**

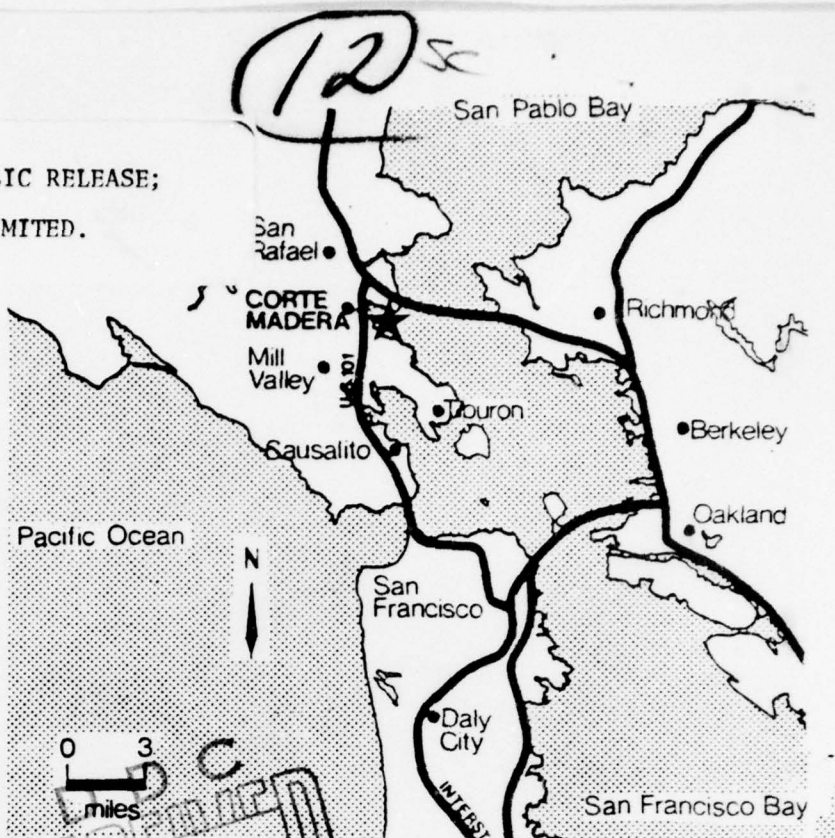
**HAHN SHOPPING CENTER
(MARIN MALL REGIONAL
SHOPPING CENTER)**

**Corte Madera,
Marin County,
California**

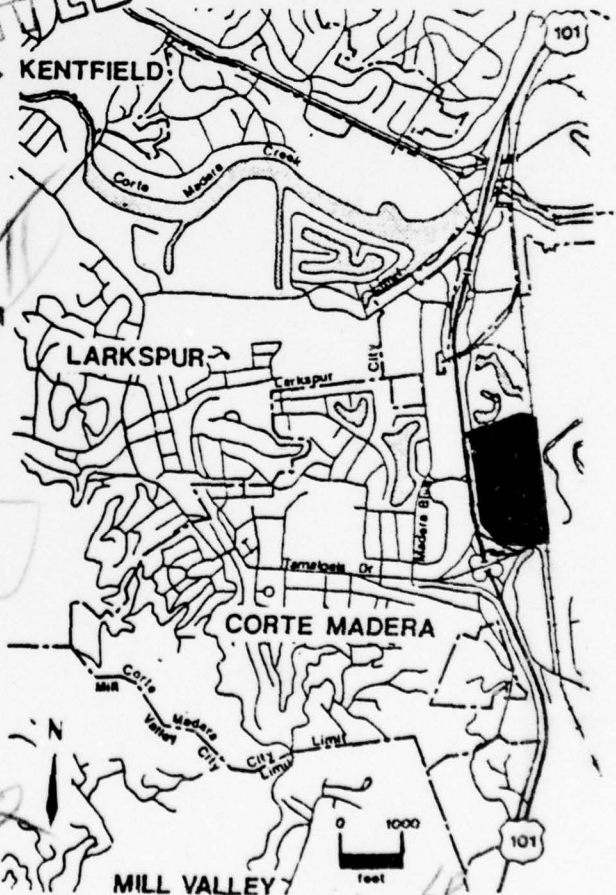
**Regulatory Permit
Application By
Ernest W. Hahn, Inc.
Public Notice
No. 11101-47**

**U.S. Army Engineer
District, San Francisco**

AUGUST 1978



LEVEL





DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
211 MAIN STREET
SAN FRANCISCO, CALIFORNIA 94105

SPNED-E/SPNCO-R

23 AUGUST 1978

RESPONSE REQUIRED BY: 25 SEPTEMBER 1978

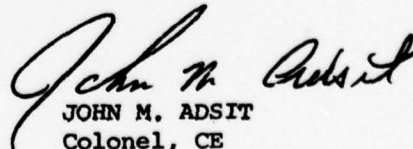
MARIN MALL FINAL ENVIRONMENTAL STATEMENT: COMMENT PERIOD

For the application announced in San Francisco District Public Notice 11101-47

TO WHOM IT MAY CONCERN:

1. As announced in Public Notice No. 11101-47 (9 Nov 1976), Ernest W. Hahn, Inc., 200 Continental Boulevard, El Segundo, California (90245), has applied to the Department of the Army for a permit for the filling of an area of his land in Corte Madera, California. The fill area is part of a larger site which would be used for the development of a regional shopping center.
2. In response to the National Environmental Policy Act of 1969, Public Law 91-190, the San Francisco District, U.S. Army Corps of Engineers, has prepared a Final Environmental Statement (FES) for the subject permit application. The FES was announced in the Federal Register on 7 August 1978. The Draft Environmental Statement for the Hahn Shopping Center was issued in January of 1974 and the Proposed Final Environmental Statement for the revised Marin Mall project was released in May of 1977. A Corps public hearing concerning the project was held on 27 June 1977.
3. The District is now soliciting comments and views of appropriate government agencies, interested groups and individuals concerning the FES. Please submit your comments to the District Engineer, San Francisco District, by the date indicated above so that they can be considered along with other relevant information in arriving at the final decision on the application. The final decision on the permit cannot be made until 30 days have passed from the announcement in the Federal Register that the FES has been filed with the Environmental Protection Agency or until 30 days from the mailing of the document, whichever date is later.
4. Copies of the FES are available for review by contacting the San Francisco District (415-556-0325) and at the Marin County Free Library, the Corte Madera Regional Library, and the Novato Library.

Sincerely yours,


JOHN M. ADSIT
Colonel, CE
District Engineer

79 01 31 153

SUMMARY

HAHN SHOPPING CENTER
(MARIN MALL REGIONAL SHOPPING CENTER)
CORTE MADERA, MARIN COUNTY, CALIFORNIA

REGULATORY PERMIT APPLICATION BY
ERNEST W. HAHN, INC.

Public Notice No. 11101-47

() DRAFT

(X) FINAL ENVIRONMENTAL STATEMENT

RESPONSIBLE OFFICE: U.S. Army Engineer District, San Francisco
211 Main Street
San Francisco, California 94105

1. NAME OF ACTION: (X) ADMINISTRATIVE () LEGISLATIVE

2. DESCRIPTION OF ACTION: The granting of a permit for the filling of approximately 45 acres of grasslands, and seasonal wetland, with 500,000 cubic yards of dry fill, including both basic fill and surcharge. The utilization of this acreage plus 12 additional acres of previously filled land colonized by grasses and forbs as the site for a regional shopping center with 670,000 square-foot gross leasable area having 3,441 parking spaces, two free-standing department stores, mall retail shop area, and a movie theater. Another 28.5 acres of marsh area would be donated to the Town of Corte Madera for wildlife habitat and open-space use.

3. (A) ENVIRONMENTAL IMPACTS: The donation of 28.5 acres of marsh area to Corte Madera as a wildlife preserve would assure its preservation. Total shopping miles driven in Marin County would be reduced. Marin County sales of department-store type merchandise would increase.

(B) ADVERSE ENVIRONMENTAL EFFECTS: Loss of wildlife habitat, primarily grasslands, with isolated areas of seasonal wetland also to be removed. An additional source of urban runoff would be created. An increase in the flood hazard for adjacent areas due to loss of storage area for flood waters. An increase in traffic congestion and accompanying noise. An increase in air pollutant concentrations in the immediate project area. Alteration of the view of the Bay from some viewpoints. Increased strain on public services such as fire and police protection. Temporary decrease in retail sales for adjacent areas. Temporary increases in dust, traffic, and noise during construction.

4. ALTERNATIVES TO THE PROPOSED ACTION: Denial of the permit.
Issuance of the permit with conditions. Modified project. The project
has been scaled down from the original proposal to lessen the environ-
mental impact.

5. COMMENTS RECEIVED CONCERNING THE DRAFT ENVIRONMENTAL STATEMENT:

U.S. Environmental Protection Agency
U.S. Department of the Interior
U.S. Department of Health, Education and Welfare
Federal Highway Administration
Advisory Council on Historic Preservation
Council on Environmental Quality
The Resources Agency of California
Marin Municipal Water District
Town of Corte Madera
Marin Conservation League
Ernest W. Hahn, Inc.
Seven individuals

6. COMMENTS RECEIVED CONCERNING THE PROPOSED FINAL ENVIRONMENTAL
STATEMENT:

U.S. Environmental Protection Agency
Federal Highway Administration
California State Department of Transportation
California State Department of Health
California State Department of Water Resources
Marin Municipal Water District
Town of Corte Madera (2)
City of San Rafael
Sierra Club
Marin Audubon Society
Livingston and Associates
Twenty-seven individuals

7. DRAFT STATEMENT TO CEQ 4 January 1974.

PROPOSED FINAL STATEMENT RELEASED 9 May 1977.

FINAL STATEMENT TO EPA 28 JUL 1978.

FINAL
ENVIRONMENTAL STATEMENT

HAHN SHOPPING CENTER
(MARIN MALL REGIONAL SHOPPING CENTER)
CORTE MADERA, MARIN COUNTY, CALIFORNIA

REGULATORY PERMIT APPLICATION BY
ERNEST W. HAHN, INC.
PUBLIC NOTICE NO. 11101-47

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ERRATA SHEET

HAHN SHOPPING CENTER
(MARIN MALL REGIONAL SHOPPING CENTER)
CORTE MADERA, MARIN COUNTY, CALIFORNIA
Public Notice No. 11101-47

FINAL ENVIRONMENTAL STATEMENT

<u>Page</u>	<u>Paragraph</u>	<u>Addition or Correction</u>
5,20, 44	1.11(h), 2.49, 4.39	In a telephone conversation on 23 May 1978, Jo Duphie of the Marin Municipal Water District, provided an update of the water supply situation. The Water District Board of Directors is at this time considering the lifting of the water moratorium for their service area. A California Environmental Quality Act (CEQA) review will likely be carried out by the Water District as part of the decision making process concerning the lifting of the moratorium. The Water District Board of Directors is now developing a Safe Water Supply Program which would be used as the primary guideline for determining water availability for projects such as the Marin Mall.
25	2.72	This paragraph discusses the Air Quality Maintenance Plan for the San Francisco Bay Area air basin. It should be noted that the U. S. Environmental Protection Agency is now requiring State Implementation Plans (SIP's) by 1 January 1979 which show how National Standards can be attained by December of 1982. For Oxidant and Carbon Monoxide extensions may be granted to 1987 if all reasonable technology has been applied. The 3 March 1978 issue of the Federal Register announced that the Bay Area does now not meet the Primary Standards for Oxidant and Carbon Monoxide and does not meet the Secondary Standard for Total Suspended Particulate. Also, it should be noted that the Federal New Source Review program does not apply because a shopping center is considered an "indirect source."

FINAL
ENVIRONMENTAL STATEMENT

HAHN SHOPPING CENTER
(MARIN MALL REGIONAL SHOPPING CENTER)
CORTE MADERA, MARIN COUNTY, CALIFORNIA

REGULATORY PERMIT APPLICATION BY
ERNEST W. HAHN, INC.
PUBLIC NOTICE NO. 11101-47

1.00. PROJECT DESCRIPTION

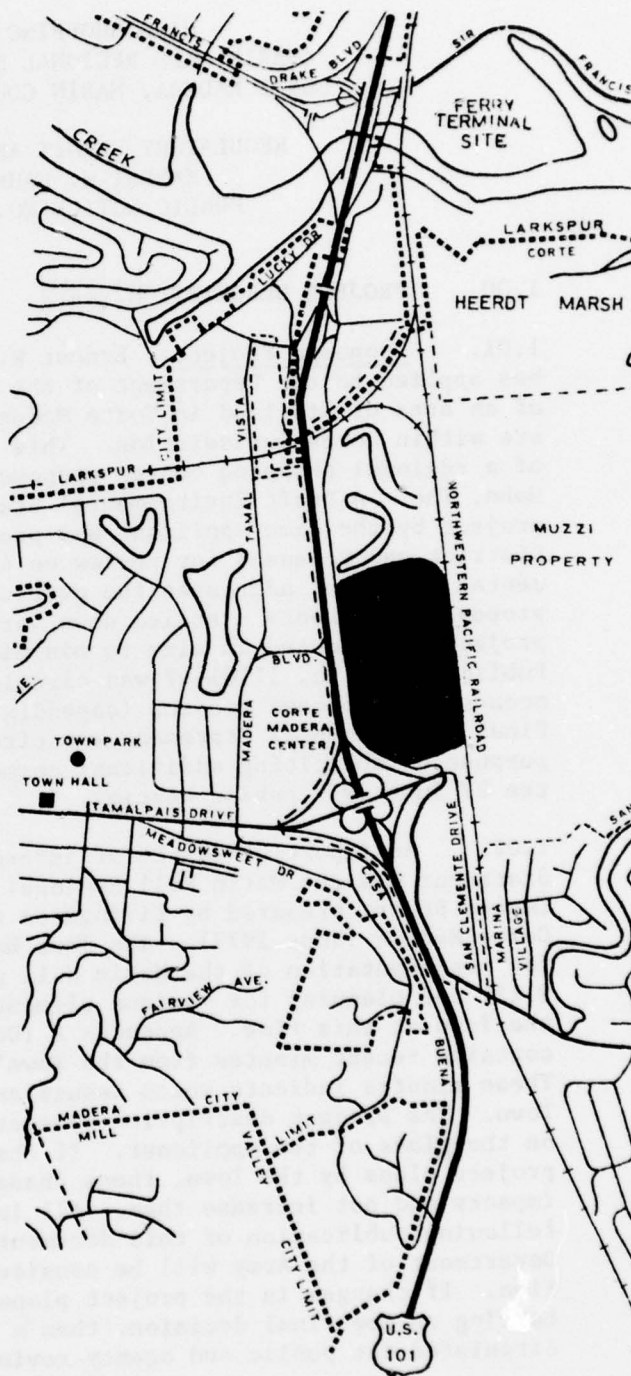
1.01. Proposed Project. Ernest W. Hahn, Inc., of Hawthorne, California, has applied to the Department of the Army for a permit for the filling of an area of his land in Corte Madera, California, of which 25 acres are within Corps jurisdiction. This fill area is part of a larger site of a regional shopping center proposed for construction by Ernest W. Hahn, Inc. A Draft Environmental Statement for a similar proposed project by the same applicant was prepared by the Corps San Francisco District and released for review on 4 January 1974. This Final Environmental Statement addresses the most current proposal for the site. This proposal represents a scaled down version of the earlier proposal. The project was reduced in size to minimize the environmental impact. Corps Public Notice No. 11101-47 was circulated on 9 November 1976, to announce the proposed project (Appendix A, Document A-24). A Proposed Final Environmental Statement was circulated on 9 May 1977 with the purpose of soliciting additional comments and providing information for the 27 June 1977 public hearing.

1.02. An important source of information for this Final Environmental Statement was the Marin Mall Regional Shopping Center Environmental Impact Report prepared by Livingston and Associates for the Town of Corte Madera (June 1977). The Town has to date not yet given approval for implementation of the Marin Mall project (see paragraphs 1.14 and 9.15) and planning for various elements of the project are on-going by the Town at this time. Appendix A (Document A-32) of this document contains recent minutes from the Town's Planning Commission meetings. These minutes indicate which issues are still being considered by the Town. The project description presented on the following pages is based on the plans of the applicant. If changes are brought about in the project plans by the Town, these changes would likely decrease adverse impacts and not increase them. All improvements in the project made following publication of this document and prior to final action by the Department of the Army will be considered in the decision on the application. If changes in the project plans were significant and could have a bearing on the final decision, then a supplemental document could be circulated for public and agency review.

1.03. The Town of Corte Madera is in Marin County about ten miles north of San Francisco (Plate 1). The project site is located immediately northeast of the Tamalpais Drive freeway interchange on U.S. Highway 101 (Plate 2). The project site is bound on the east by an abandoned Northwestern Pacific Railway right-of-way.

1.04. The site consists of low lands behind dikes, of which 12 acres have been previously filled, 45 acres are grassland and seasonal wetland (Table 14) which would be filled, and 28.5 acres are marshlands that would be donated to Corte Madera for wildlife habitat and open space use (Paragraph 1.38).

1.05. Project Authorization. The Corps of Engineers has authority over these lands under Section 10 of the Rivers and Harbors Act of 1899, (33 U.S.C. Sec. 403), and under Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Sec. 1344). As explained in Public Notices 71-22 and 71-22(a) dated 11 June 1971 and 18 January 1972, respectively, all work undertaken in navigable waters below the plane of the mean of higher high waters (MHHW), including all new work in unfilled portions of diked areas formerly below MHHW, requires a permit from the Secretary of the Army acting through the Chief of Engineers. Section 404 of the Federal Water Pollution Control Act authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into the waters of the United States.



1.06. In response to the provisions of the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. Sec. 4321 et seq.), an evaluation of the impacts of a proposed activity on all aspects of the quality of the human environment is required prior to a permit application being considered for approval. This Environmental Statement is such an evaluation of the Marin Mall Regional Shopping Center.

1.07. The application for a Department of the Army permit by Ernest W. Hahn, Inc. was first announced by the Corps in Public Notice No. 73-24, 15 September 1972. The proposal was later revised in order to mitigate the impact of the project on wildlife habitat and this revision was announced in Public Notice No. 73-24(a), 13 April 1973. In accordance with Department of the Army regulations, comments were solicited on both public notices from the general public as well as from specific Federal and State agencies. A public meeting was held in reference to Public Notice No. 73-24(a) on 5 June 1973 and continued on 12 June 1973; this meeting was announced in Public Notice No. 73-92, 4 May 1973.

1.08. In the spring of 1975, based upon regulations in force in April 1975, the Corps determined that the subject Marin Mall Regional Shopping Center site (commonly referred to as the Hahn shopping center site at that time) was not within its regulatory jurisdiction. The applicant and the town of Corte Madera were informed of this finding by letters dated 7 May 1975. Also early in 1975, the District Court of the District of Columbia ordered the Corps of Engineers to extend its jurisdiction under Section 404 of the Federal Water Pollution Control Act Amendments (FWPCA) of 1972 to all waters of the United States. The Corps, based on revised regulations, reexamined all factors involved in its jurisdictional decision over the Hahn site. The site was found to constitute a coastal wetland adjacent to coastal waters (10.8 acres of the site were found to be waters of the U.S.), described in Corps regulations, and a Department of the Army permit under Section 404 of the FWPCA was found to be required.

1.09. Following the completion of the Corps reexamination of its jurisdiction over the site, the United States District Court for the Northern District of California issued a decision on Corps jurisdiction behind dikes in the San Francisco Bay area under the Rivers and Harbors Act of 1899. On 11 March 1976, that Court ruled that diked areas "which lie within the former line of mean higher high water (MHHW) in its unobstructed, natural state" are still within jurisdiction of that Act. This situation was found to exist at the Hahn site. San Francisco District Public Notice No. 11101-47, dated 21 June 1976 (Document A-23, Appendix A), announced the above summarized jurisdictional information. San Francisco District Public Notice No. 11101-47 (revision of 21 June 1977) dated 9 November 1976 (Document A-24, Appendix A), announced the current application which is the subject of this final environmental statement.

1.10. The San Francisco Bay Conservation and Development Commission does not have jurisdiction over this project because the site is more than 100 feet from the Bay boundary (see Paragraph 6.13, Alternative 7). The California Regional Water Quality Control Board has indicated that Water Quality Certification of the subject project will not be required (see 2.39 and 4.33 for water quality discussion) and that the requirement for a waste discharge report has been waived. The Board is requiring compliance with certain conditions as listed in Document A-26, Appendix A.

1.11. Issues Identified Through Public and Agency Review. Based primarily on comments received concerning the Marin Mall Proposed Final ES and the Corps public hearing held in June 1977, the following issues are among those which have generated the most interest:

a. Traffic congestion (refer to section 4. 63): Traffic congestion in the project area is expected to continue to increase in the immediate future, but this would likely occur with or without Marin Mall. From among the roadways (Section 2.93) which would be heavily congested by 1985, the U.S. 101 freeway would probably be most affected by the proposed shopping center. Marin Mall would add to an already serious situation. Roadway improvements could minimize the traffic problems, but to date firm plans have not been made to carry out any of the recommended improvements (Also see item "b" below).

b. Conformance with the Corte Madera General Plan (Sections 3.06 and 3.13): The proposed activity may not be entirely in conformance with the Town of Corte Madera General Plan. The primary points of non-conformance appear to be concerned with the amount of acreage offered for wildlife preserve and the lack of solution for traffic problems. The town has indicated that 32 acres shall be put into permanent preservation, but the applicant's proposal is for 28.5 acres. Concerning traffic: the town can approve the project if a satisfactory solution to the traffic problems is put forth, but the completed shopping center could not be put into use until the traffic improvements are actually completed. The project would conflict with a stated goal of the General Plan to preserve and enhance the small town scale and character in the town.

c. Loss of Wetland (Sections 4.42 and 6.11): The project site is historical wetland which has been reclaimed. The southern portion of the site has been filled to an elevation above mean higher high water (MHHW). The central and northern portions of the site are essentially below MHHW with the northern portion containing an area of seasonal wetland. The majority of the fill would be placed on areas which are now essentially dry. Wetland restoration for the low-lying portions of the site has not been given serious consideration probably because of prohibitive cost (expenses would result due to alteration of existing dike network and due to the protecting of lowlying lands).

d. Drainage (Section 4.32): The project site provides holding capacity for storm waters. The site now accomodates a 50-year storm, but following development, would no longer have this capacity. The applicant has indicated that project plans would provide for the protection of U.S. Highway 101.

e. Marketing (Section 4.03): Available data indicates that the market would support the shopping center. The redistribution of shoppers would have some adverse impact on the existing Corte Madera Shopping Center and downtown San Rafael.

f. Alternate Site Availability (Appendix A, Document A-27): The applicant has considered other possible shopping center sites, but has indicated that the subject site is the most desirable. Site location is considered questionable by some because of the traffic problems and because the site is near the bay, yet the project is not water-oriented.

g. Railroad Right-of-Way: The current project plan includes the use of a small portion of the abandoned Northwest Pacific Railroad right-of-way. The California State Department of Transportation has recently completed a report concerning the railroad right-of-way abandonment and recommended that a study be carried out which would, among other things, determine the feasibility of using the right-of-way as a transportation corridor. Completion of the Marin Mall project, as it is currently designed, could interfere with plans for the transportation corridor.

h. Water Supply (Section 4.39): The Marin Municipal Water District moratorium permits new developments to use water up to the historical maximum use for a site. Therefore, until the moratorium is lifted, the Marin Mall site will be limited to 0.86 acre-feet yearly, the amount used by the State Highway Patrol Offices and one small industrial building on the northern portion of the site. Annual shopping center water consumption is expected to be in the range of 75-85 acre-feet.

1.12. Project History. In 1970 the Town of Corte Madera was asked to rezone the proposed project site's 17 southernmost acres to allow construction of a large discount department store. The Town Council rejected the zoning proposal, feeling that the development was not appropriate and could not be planned consistently with adjacent highway frontage.

1.13. In March 1971, the owners of the same 17-acre parcel submitted a different proposal, not involving discount stores. During the zoning discussions, individual members of the Council made strong recommendations that the various parcels be combined for development in a single project. The owners of the property approached Ernest W. Hahn, Inc. to explore the feasibility of a regional shopping facility. Ernest W. Hahn, Inc. subsequently purchased interest in the site and presented a plan for a regional shopping center. The 1971 proposal was for a shopping center approximately twice as large as the current proposal.

1.14. On 22 May 1972, a Grading Application and Permit for placing of approximately 925,000 cubic yards of fill on an 83-acre site east of U.S. 101 was filed on behalf of Ernest W. Hahn, Inc. with Corte Madera. This Fill Permit was approved by the Town Council on 25 May 1972. The applicant later requested a modification to the Grading Permit to conform with the reduced configuration of the shopping center site as approved by the Planning Commission and Town Council to save the existing cut-off meanders. The Town Council approved this modification on 21 May 1973. On 30 July 1973, further modification of the Grading Permit was requested to allow for a reduction in the center's square footage (a measure developed from public hearings held by the Corte Madera Planning Commission, Town Council, and the Corps of Engineers). The Town Council denied approval for further modification of the Grading Permit based on lack of sufficient plans and elevation of the proposed shopping center buildings. Upon subsequent submission of required plans, the Town Council approved further modification of the Grading Permit on 20 August 1973. On 21 January 1974, the Town Council suspended the Grading Permit pending adoption of the new Corte Madera General Plan pending further action by the Town Council.

1.15. Correspondence from the Town of Corte Madera dated September 1974 (Documents A-8 and A-9, Appendix A), indicated that there was new membership on the Town Council and that body's position on the project had changed.

1.16. A redevelopment plan for the subject area was superseded in July 1975 by the adoption of the Town of Corte Madera General Plan. The General Plan includes many of the concerns of the Redevelopment Plan, but is more comprehensive in scope and detailed in its requirements (refer to paragraph 3.06).

1.17. The Town Council held an advisory referendum on 2 November 1976, proposing the question:

"Do you favor approval of a shopping center containing approximately 670,000 square feet of commercial store space at the location referred to as Marin Mall (Hahn property) east of Highway 101 and north of the freeway interchange in Corte Madera?"

The results showed 54.4% of those voting opposed the project, 41.9% were in favor of the project, and 3.6% expressed no opinion. The results of this referendum are not legally binding either on the Town or upon other jurisdictions.

1.18. The Marin Mall project requires authorization by the Town of Corte Madera. Department of the Army regulations state that "If the responsible Federal, State, and/or local agency fails to take definitive action to grant or deny required authorizations ... within three months of the issuance of the public notice, the District Engineer shall process the application to a conclusion (33 CFR 320.4 (j)(5) 1977)." Also,

"Where the required Federal, State, and/or local certification and/or authorization has been denied, the application for a Department of the Army permit will be denied without prejudice to the right of the applicant to reinstate processing of his application if subsequent approval is received ... (33 CFR 320.4 (j)(1) 1977)."

1.19. Economics. Lord & LeBlanc of San Francisco, California, has prepared economic analyses of the marketing and fiscal aspects of the project (Livingston, 1976). It is estimated that the project will be valued at \$31 to \$47 million when it reaches full operation. The project's assessed property value will equal 25 percent of Corte Madera's total assessed property value. The estimated revenues to local tax jurisdictions are estimated between \$868,264 per year and \$640,142. Annual cost to municipal government is estimated at \$330,977 (Livingston and Associates, 1976).

1.20. A State constitutional amendment of 1952 permits a unique form of local financing of redevelopment projects in California. In adopting the redevelopment plan for a project area, a city or town council may provide that incremental or new ad valorem tax revenues generated within the various taxing agencies will continue to receive those tax revenues generated by the assessed valuation in the project area at the time of the adoption of the plan; and all additional revenues (those tax revenues generated by the increase in assessed valuation of property within the project area), shall be available to the redevelopment agency to repay bonds or other indebtedness incurred by the agency in carrying out the project.

1.21. Under this provision, the Redevelopment Agency, created in March of 1972, assumed a total bond issue of \$6.8 million (\$5 million after funded interest). Based upon the tax increment generated, Table 1 presents the bond amortization schedule for a \$6.8 million issue against the tax increment revenue generated by the regional center.

Engineering Design

1.22. Method of Fill. The grading of the project site will be divided into two phases: Surcharging, and Surcharge Removal/Final Grading.

1.23. Surcharging is essentially the placement of uncompacted fill on a site to accelerate the rate of settlement. This process is required when soils are soft and will compress and settle over a long period of time. This pre-loading or surcharging speeds up the settlement and decreases the variation in the amount of settlement on different parts of a site.

1.24. The fill material will come from roll the Hutchinson Company quarry* located north of the project site on East Sir Francis Drake Boulevard. The material will be trucked and dumped in a continuous operation, and then handled with other earthmoving equipment. To improve the mobility of the earthmoving equipment over the soft soil and to permit free drainage from the soft soil, the first layer of the fill placed across the site would consist of rocky or gravelly soil. Estimates are that this first layer (approximately one foot in depth) can be compacted to at least 85 percent by the traffic generated by the earthmoving equipment. All subsequent fill would be spread over the site in thin layers, and all permanent fill would be compacted to at least 90 percent. To minimize the possibility of mud waves, the height of compacted fill placed over the initial layer of gravelly fill would be controlled so that no layer will have a face greater than three feet in height. This height may have to be less than three feet depending on the actual behavior of the soft mud. Subsequent height of fill should not exceed three feet within a distance of 50 feet of the face slope of an underlying layer of fill. The exterior slopes of the temporary surcharge fill would be no steeper than 6:1 (horizontal:vertical). Some adjustment in these figures may be required during the actual work.

1.25. Conclusion of the surcharge period would be determined by continuous monitoring and measurement of settlement monuments placed throughout the surcharge site. When the calculated degree of subgrade consolidation has taken place, the surcharge would be removed and final grading would commence. Removal should occur between 10 and 12 months after placing the surcharge material, reusing part of it as compacted fill for the remainder of the site and for offsite grading in constructing perimeter roads and levees. Excess surcharge material would be exported from the site. The final elevation of the entire area is expected to be approximately 7.6 feet above mean lower low water (MLLW).

1.26. The total amount of fill for this operation would be approximately 500,000 cubic yards of dry fill, including both basic fill and surcharge. The developer has accepted bids for fill material from the Hutchinson Company quarry located just north of the proposed project site on East Sir Francis Drake Boulevard.

*It should be noted that the applicant has indicated that the Hutchinson quarry will now likely not be the source of the fill material. A search is now being carried out by the applicant to locate a reasonable alternate source area (Jensen, April 78). Because the impacts would likely be similar, it was decided to circulate this document with the Hutchinson quarry information. However, if the new fill material source area is located a considerable distance further away, it can be expected that the impacts of hauling the material would increase.

1.27. Drainage and Flood Control. Existing drainage flows across the site would be accommodated during the surcharging phase. The existing channel along the east edge of the site would be maintained to allow drainage from the two existing 48-inch pipes along San Clemente Drive at the south to the existing cut-off meanders and pump north of the site. A temporary channel would be cut to channel the outflow from the existing culvert under U.S. 101 on the west into the existing meanders at the north. The original development plan called for removal of the existing Northwestern Railroad embankment for use as fill. A new temporary levee would have been built, connected at its north and south ends to the railroad embankment. The current plan uses no lands east of the railway right-of-way, and plans will have to be made to provide adequate flood protection during the surcharge phase, since the railway embankment is neither high enough nor properly constructed to provide such protection. The entire shopping center site will be protected by a system of new levees constructed with the new loop road around the site. The roadway will be built up to elevation 11.8 feet (MLLW). Over a period of 10 years, the roadway is computed to settle approximately 2.0 feet, leaving a level of approximately 9.8 feet (MLLW) around the project. The 100-year tide is 9.0 feet MLLW.

1.28. Final drainage of the site would be through a below-grade storm drainage system which would flow into the existing meanders at the north end of the site. Below-grade drainage pipes would connect the existing pipes at San Clemente Drive and the existing culvert under U.S. 101 to the new below-grade drainage system. This drainage system would be designed to accommodate surface flows from the Town to reduce the potential for flooding on the west side of U.S. 101.

1.29. With the construction of the below-grade drainage pipes, the north and south meanders would actually function as one drainage system. They would normally empty into channels leading into the Bay through tide gates at low tide. A pump station would provide additional discharge capacity as required during periods of sustained high tides or unusually heavy surface flows from the Town.

1.30. Storm water treatment will occur at the southern portion of the meander area, immediately north of the project site. Initial treatment will consist of a catch basin with installed redwood baffles constructed in this treatment area. If this sedimentation basin fails to correct water quality problems, threshold treatment, including at least coagulation, would be provided. After the monitoring of the post-project runoff, if a high bacterial count is evidenced, the water would be disinfected. These water treatment measures were developed in conjunction with meetings between Ernest W. Hahn, Inc. and representatives of the United States Department of the Interior, the United States Environmental Protection Agency, and the Fish and Wildlife Service (Documents A-10 and A-11, Appendix A).

1.31. Structural Design. The shopping center would consist of two two-level department stores, eight one-level clusters of retail shops, and a free-standing movie theater. The department stores and shops would be connected by open pedestrian malls as shown in Plate 3. Present plans call for the shopping center buildings (except for the theater) and connecting pedestrian malls to cover a land area of approximately 1,250 feet by 550 feet, with the longer dimension parallel to the freeway. Mall shop buildings will be about 20 feet in height, and the two department stores will be about 42 feet high.

1.32. The proposed shopping center site is zoned Commercial C-2 (Regional Shopping) and would be required to adhere to the Town Zoning Ordinance 298, as amended. This regulation governs such matters as identification signage, height of structures, off-street parking, loading facilities, and landscaped areas. The Site Plan, architectural elevations, and landscape plan would be submitted to the Corte Madera Board of Design and the Planning Commission for final review and approval prior to construction.

1.33. The architectural design of the project would incorporate structural features that would permit differential settlements along the exterior of the building. The exact mechanics have yet to be defined; however, differential rotation wall panels would be provided in the joint between panels. Differential settlement within the structure would be accommodated by designing flexible connections between steel beams, girders and columns. This design would also minimize the potential for collapse should liquefaction occur on the site (Englekirk, 1974).

1.34. Inter-relationship and Compatibility of the Project with Existing or Proposed Corps or Other Agency Projects. Two Federal projects in the immediate vicinity are the newly completed Golden Gate Bridge, Highway and Transportation District's ferry terminal in Larkspur and the Corps of Engineers' Corte Madera Creek Flood Control Project in central Marin County. The Department of Transportation, Urban Mass Transportation Administration, provided partial funding for the ferry terminal project. In July 1972, the U.S. Department of Transportation issued the Final Environmental Impact Statement on the Golden Gate Ferry and Terminal Project. The Larkspur Ferry Terminal was the subject of Supplement No. 1 to the Final Environmental Impact Statement (UMTA, 1974).

1.35. The location of the terminal is shown on Plate 2. The ferry terminal project involved dredging approximately 1,600,000 cubic yards of sediments, including removal of a one-acre submerged tidal island created by a sewer outflow. Dredged material was disposed in a permanently diked portion of the Muzzi property (Area B, Plate 2) located across the Northwestern Pacific Railroad right-of-way, east of the shopping center site. A 125-acre portion of this site is intended for marsh restoration. The initial phase of this project, dike breaching, has taken place.

1.36. A permit for dredging and dumping was issued by the San Francisco Bay Conservation and Development Commission (1974). A Department of the Army permit (November 1974) has been issued for dredging and terminal construction. The ferry is now in operation.

1.37. The Corte Madera Creek Flood Control Project has been under construction since 1968. There is no direct relationship between the flood control project and the proposed shopping center. The shopping center is subject to flooding from high tides or storm runoff from the area west of U.S. 101 but is not directly under the influence of Corte Madera Creek.

1.38. Fish and Wildlife Mitigation. The U.S. Fish and Wildlife Service states (Document A-28, Appendix A) that they are "...generally opposed to all projects degrading the existing and restorable natural resource values of present and former tidelands. Only in cases of negligible damage to natural resource value (non-restorable) and in certain projects requiring waterfront locations, do we not object to the issuance of Army Corps of Engineers' permits. In those projects which do cause environmental damage, we recommend that no permit be granted until satisfactory mitigation has been proposed to compensate for lost resources, uses, and values. In this particular case while some resource values remain on the proposed fill area an opportunity exists to substantially mitigate this loss through the implementation of certain measures." The Service further states that ".....based on this opportunity to satisfactorily mitigate/compensate resource loss, and previous agreements made by this Service and the Department of the Interior we will not object to the work described in the public notice provided the following stipulations are incorporated as conditions of any permit issued." These stipulations are:

a. Relocation of the roadway adjacent to the mitigation area so that it is located not closer than 100 feet to the southernmost pond. As an alternative to relocation of the roadway, the triangular-shaped area immediately north of the 30-acre mitigation area may be acquired and developed for fish and wildlife purposes.

b. Installation of water treatment facilities adequate to ensure that the quality of surface drainage water entering the mitigation area from the shopping center does not fall below its present level.

c. Development and implementation of a habitat management program on the 30-acre mitigation site (28.5 acres have been offered) to compensate for the resource loss on the area to be filled. Measures should include such items as restriction of access, development of additional water areas and the maintenance of minimum water levels. Additionally, an easement to restrict the use of the lands to wildlife purposes subject only to the needs of flood control would be incorporated into this management plan.

1.39. The applicant is considering satisfying the three items listed above but to date has not provided plans which indicate compliance.

1.40. The California State Department of Fish and Game indicates (Document A-29, Appendix A) that ".....a conservation easement should be placed on the approximate 30-acre habitat and drainage area that will be deeded to the town of Corte Madera. This easement will insure the protection and use of the area by wildlife in perpetuity. Uses other than those oriented to wildlife purposes should not be permitted." It appears that the 28.5 acres of land the applicant has offered for mitigation would essentially satisfy the Department of Fish and Game. The conservation easement would help prevent it from reverting to other purposes.

2.00. ENVIRONMENTAL SETTING WITHOUT THE PROJECT

2.01. Regional Location. Corte Madera lies in the southeast portion of Marin County, about eight miles north of the Golden Gate Bridge (Plate 1). The Town is the approximate center of Marin County's more highly populated southern part. To the south are the communities of Mill Valley, Sausalito, and Tiburon. To the north are Larkspur, Greenbrae, San Anselmo, San Rafael, and Novato. U.S. Highway 101 serves Corte Madera, roughly bisecting the Town into eastern and western parts. Plate 19 indicates the Marin Mall site and other nearby development and features.

Economics

2.02. Population. In April 1970, Corte Madera had a population of 9,082 or just under 4.5 percent of Marin County's population of 206,000 (Table 3). Census data shows that Corte Madera's population was structured much like County population by age (Table 4). About 70 percent of the Town's residents live in the area west of U.S. 101 (Town of Corte Madera General Plan, 1975). The Town reported that its 1975 population had declined 10.2 percent to 8,500.

2.03. Marin County's population is concentrated in a corridor along U.S. 101 throughout the southern and central parts of the County. In the north, population is more scattered. The center of population has moved northward, but there has been a recent decline in the rate of population growth. Marin County's population in 1975 was 217,000 and its projected population in 1985 is now estimated at 242,700 (California Department of Finance, 1 August 1977).

2.04. Income. An economic and marketing analysis was prepared by Lord & LeBlanc in 1976 which estimated the 1975 disposable income in Marin County to be \$16,000 per household. There were about 77,000 households in Marin County in 1975, yielding a figure of approximately \$1.2 billion in "disposable" income countywide (Lord & LeBlanc, 1976). The Lord & LeBlanc study used somewhat different population figures than those of the California Department of Finance. Marin County has consistently enjoyed a somewhat higher per capita income than the state average. In 1970 census data, Marin County exceeded the Nine County Bay Area in per capita income by 21 percent.

2.05. Retail Commerce. This report distinguishes between two types of retail merchandising: department store type merchandising (DSTM) and convenience or specialty shops. The major retail centers in central and southern Marin County are: Northgate Shopping Center with Sears and the Emporium; downtown San Rafael with Macy's and Penney's; the Corte Madera Center with Montgomery Ward and Penney's; downtown Mill Valley; central Sausalito; San Anselmo; and the Town and Country Village in Strawberry (Plate 4). Of the smaller shopping facilities throughout

the county, the largest group is in Novato with about 1 million square feet in outlets. The existing DSTM facilities are Corte Madera Shopping Center across 101 from the Hahn site, downtown San Rafael, and Northgate Shopping Center in the Terra Linda section of San Rafael.

2.06. In order to breakdown overall gross retail and services spending into various categories of expenditures, current patterns of spending in Marin County must be compared with potentials (i.e., expected sales levels given the nature of the area). Recorded 1974 taxable sales in Marin County were \$454.2 million, and from this figure total sales can be estimated at \$595.7 million. (Certain items, such as food purchases, are not subject to sales tax and volumes can only be estimated from reported taxable sales.) The potential sales that would normally be generated by a resident population the size of Marin County's, however, differ greatly from the actual sales. For example, computed statistics for 1975 reveal that Marin households could have supported \$195 million of convenience goods sales, but the actual level appears to have been about \$183 million (estimated from the 1974 figure of \$171 million). In the comparison goods category, actual sales of \$164 million were 11% below potential sales of \$184 million. Particularly if it is assumed that a portion of the actual sales volume was generated by visitors' expenditures, it appears that there was leakage of comparison goods sales potential to San Francisco and elsewhere.

2.07. The Corte Madera Shopping Center, directly across the freeway from the proposed center, consists of approximately 27 developed acres. The existing center comprises 240,000 square feet of retail shopping center space. The major tenants are two regionally oriented department stores: J.C. Penney and Montgomery Ward. In addition, there are 23 retail specialty shops, small restaurants, one supermarket, three financial institutions, an office complex, and a theater.

2.08. The central area of San Rafael historically has been the commercial and business center of not only San Rafael, but of Marin County as well. As with other downtown areas in major cities, existing business indicators foresee a decline for this area in the face of more modern commercial suburban growth. Small and divided ownerships have prevented the expansion of major stores. Parking is inadequate and general attractiveness of the area needs improvement. Access to the area is poor and the streets are congested. The City Council of San Rafael adopted its Redevelopment Plan for Central San Rafael Project Area in November 1972. The central objective of this plan is to renew and create economic stimulation within this area and to reestablish the image and awareness of this area as the business and commercial center of San Rafael and Marin County (San Rafael Redevelopment Agency, 1972).

2.09. The City of Larkspur is considering a proposal for a major development with a total of 350,000 square feet, of which 325,000 square feet would be retail/commercial space. An environment impact report is being prepared for Larkspur by the San Francisco firm Environmental Impact Planning, Inc. (City of Larkspur, 29 November 1977). No marketing analysis is available which considers the Larkspur center together with Marin Mall and the existing Corte Madera Shopping Center.

2.10. Service Area. A given regional shopping complex will normally derive the bulk of its support (85-90 percent) from residents of a defined geographic area or zone of influence. The primary determinants of the size of this area are distance and driving time from a site, access convenience provided by existing and future highway systems, distribution of residential population, the existence of natural or manmade barriers such as mountains and railroads, and the merchandising strength of a proposed center in relationship to the availability and strength of alternative shopping facilities.

2.11. In testing the market support for the proposed shopping center, Marin County was selected as the trade area (Botti, April 1974). The project would be relatively well located to draw support from both the coastal areas as well as the population served by U.S. 101. Although 85-90 percent of the total support would be generated from the County as a whole, it can be expected that 80-85 percent of the support would come from the area immediately around the site (Census Tracts 1110-1290, Plate 4).

2.12. In a like manner, other shopping centers would also draw from the entire County, with their major support from their own immediate areas. For example, Northgate receives the bulk of its support from the northern area of the County (Census Tracts 1012-1150, Plate 4), with a lower penetration in the southern or coastal areas of Marin County. While both centers would draw customers from the entire County and outside the County, the two centers would primarily serve separate areas within Marin County.

2.13. Existing Land and Water Uses. Plate 2 shows the proposed project site and surrounding area. Area A (Plate 2) is presently undeveloped except for a small industrial building in the northwest corner and a State Highway Patrol Office at the southern boundary along San Clemente Drive. This Area A is the site of the proposed shopping center.

2.14. The project site combined with the surrounding area (approximately 446 acres) consists for the most part of open, low-lying lands subject to periodic flooding. These lands were once a part of the extensive Corte Madera salt marsh at the edge of San Francisco Bay, but have been diked off from tidal action since the late 1800's. Some

portions (about 48 acres) of the land contains vegetation which is highly salt-tolerant and provide some upland wildlife habitat value. The Muzzi Property (Area B), although largely diked, is lower and remains as salt marsh (about 200 acres) or higher-quality upland habitat (about 54 acres). Along the easternmost border of the area is some high quality salt marsh fronted by tidal flats which extend into the Bay. Of those areas that remain in open use, there is little or no agricultural value present. The drainage is poor, subsoil permeability is slow, and runoff is slow. Due to flat slopes, the erosion hazard is slight. The Golden Gate Bridge, Highway and Transportation District utilized portions of this area as a dredged material disposal site in connection with the construction of the Larkspur ferry terminal (refer to paragraph 1.35).

2.15. The area directly north of Area A consists of grassland and salt marsh with old cut-off meanders. These meanders are brackish due to salts leaching from the soil and have a high seasonal saline variability as a result of flooding, leaching, and evaporation. This 28.5-acre area makes up the proposed land donation in the project plans.

2.16. Semi-developed land lies southwest of the shopping center project site, mostly in Area C1. Here conditions are characterized by a combination of land uses as well as flood conditions and a fragmented parcelization pattern which inhibits development.

2.17. The housing south of the proposed site in the vicinity of San Clemente Creek include the Marina Village and Mariner Cove developments, which consists of single-family detached homes. Although these developments are situated close to the Creek and the Bay, there is no access from them to the shoreline or to the diked portions of Area B.

2.18. The land west of U.S. 101 is occupied primarily by a variety of commercial facilities adjacent to the freeway including: auto-related sales and service facilities along Meadowsweet Drive (south of the Tamalpais Drive interchange); the Corte Madera Shopping Center, containing convenience and comparison retail; motels; light industry; warehousing; and administrative offices. While most of these activities are situated east of Tamal Vista and Madera Boulevards, a combination of single-family homes and apartments can be found further to the west.

2.19. Directly north of Area B is the 93-acre area generally known as the Heerdt Property, including 74 acres once called Heerdt Marsh and now designated as the Corte Madera Ecological Reserve.

2.20. Along the northern end of the Heerdt marsh, there is a narrow strip of marsh in Larkspur. South of Corte Madera Creek there are light industrial buildings, warehouses, a trailer park, a gas station, and some new retail stores. North of Corte Madera Creek, there has been

active recent development. The Golden Gate Bridge, Highway, and Transportation District has completed its ferry terminal facilities, and construction has begun for two more projects, an office complex (Wood Island) and a large development which will include office, retail, and residential units (Larkspur Landing).

Topographic and Geological Setting

2.21. Topography. Plate 5 presents the topographic setting for the project site. The plane of mean higher high water (MHHW) is indicated on this map.

2.22. Geology and Soils. A detailed subsurface investigation of the site was performed by drilling 26 borings to depths ranging from 29 to 105 feet below the existing grade (Slosson, 1973). Table 13 summarizes the boring data, and Plate 5 shows the location of the borings.

2.23. The site is underlain by minor amounts of fill and some 18 to 104 feet of Quaternary sediments (Bay Mud). These sediments overlie a complex "basement" assemblage, the Franciscan Assemblage, which is believed to be Jurassic to Cretaceous in age. The Bay Mud consists primarily of silty and clayey shallow-water marine and deltaic deposits, with minor interfingering and interlayered sandy and gravelly zones.

2.24. Minor amounts of fill are present on the site. Several acres of engineered fill exist on the southern portions of the property, which the borings logs indicate to be approximately 6 to 8 feet thick and relatively firm. The fill consists of clayey to sandy silt, with 30 percent to 80 percent angular siltstone fragments 1 to 6 inches in diameter. Occasional larger siltstone fragments are present in the fill.

2.25. Other fill is present along the Northwestern Pacific Railroad right-of-way and within the various dikes and/or levees on the property. In addition, some non-engineered fill is present near the frontage road along the west side of the property. This material has not been investigated or tested. Superficially, this fill appears to be of similar composition to the engineered fill on the southern portion of the property and contains some concrete blocks and possibly other debris.

2.26. Younger Bay Mud underlying the property is apparently Holocene in age, is approximately 17-67 feet thick, and consists primarily of unconsolidated, highly compressible gray clay and silty clay.

2.27. A layer of silty sand to sandy silt underlies the Younger Bay Mud beneath much of the site. The greenish-gray to gray to brown material is typically much more consolidated than the Younger Bay Mud. However, in a geological sense, it is still considered to be poorly consolidated.

2.28. Underlying the sandy material and the Younger Bay Mud is the Older Bay Mud. The thickness of the Older Bay Mud beneath the site ranges up to approximately 70 feet.

2.29. Bedrock of the Franciscan Assemblage underlies the site at depths of approximately 18 to 104 feet, and is a complex assemblage of sedimentary, metasedimentary, volcanic, and metamorphic rocks. Rocks of the Franciscan Assemblage consists of massive to thinly bedded siltstone and sandy siltstone with interbedded sandstone and shale. The rocks are very closely fractured, as is typical of rocks of this formation. The Franciscan Assemblage represents the oldest known rocks in the area and, as such, is considered the Basement Complex.

2.30. Sections A-A and B-B (Plates 5 and 6) show the variation in thickness of the principal strata across the site. The information presented on Plate 6 is accurate only at the boring locations and interpolation is necessary between borings.

2.31. Mineral Resources. No mineral deposits feasible for commercial extraction are known to exist within the proposed project site.

2.32. Seismicity. There are no known earthquake faults in the vicinity of Corte Madera. Several known active faults are within the San Francisco Bay region, however. The San Andreas Fault is 8.5 miles to the southwest of the project site with the Hayward Fault and Calaveras Fault 9.5 and 17 miles, respectively, northeast of the site.

2.33. The San Francisco Bay region is seismically active. The proposed site has been shaken intensively many times in the past. The most notable known earthquakes which have affected the area occurred in 1836, 1838, 1868 and 1906. During each of these earthquakes, ground surface fault rupture occurred within 20 miles of the proposed site. The 1906 earthquake, which had a magnitude on the Richter scale of 8.3, was apparently centered some 17 miles northwest of the site. Ground surface fault rupture occurred within 8.5 miles of the property. This was the largest historic earthquake to occur in California, and caused considerable damage throughout the San Francisco Bay region. Over 33 earthquakes with Richter magnitudes greater than 4.0 (the generally accepted lower limit of magnitude sufficient to damage manmade structures) were recorded within 50 miles of the project during the period of 1934-1971.

Hydrology

2.34. Surface Water. Corte Madera's present drainage system consists of a series of pipes and gravity ditches running to the Bay. During winter rains the Town's Eastern Outfall Basin uses the lands of the project site and the Muzzi property (Areas A and B, Plate 2) for the temporary storage of runoff. These former marshlands have been cut off from tidal flows and have now dried out and settled. The resulting low lands become holding ponds when filled by storm runoff. Tide gates protect them from any inward flow of the Bay's salt waters.

2.35. Storm drainage from the whole Eastern Outfall (including lands both east and west of U.S. 101) now flows to a point on the project site, from which the flow is generally northward in an open channel to a pump station with a 40 cubic feet per second (cfs) capacity. Discharge is made into an east-west outfall channel that connects with the Bay. Whenever the sub-basin's inflow-outflow rate exceeds 40 cfs, the capacity of the pump station is exceeded and the excess storm water is temporarily impounded in low areas on the project site and in the proposed wildlife preserve.

2.36. Based on "ultimate" land use and drainage facilities (average imperviousness = \pm 74 percent) the peak storm runoff discharge for the Eastside Outfall drainage basin has been calculated to be 230 cubic feet per second (cfs). With existing land uses (average imperviousness = \pm 54 percent), the peak design discharge could conservatively be expected to be about 20 percent less or \pm 180 cfs. For present watershed conditions, post-project, a 64 percent gross imperviousness is estimated. The Town's Master Storm Drainage Plan requires ponding and pumping facilities designed to control and discharge to bay waters the runoff from a 50-year storm. Other facilities (secondary drainage works, culverts, and hydraulic structures) are to be designed to accommodate a 25-year storm. At times of heavy runoff and very high tides portions of the proposed project site and the meanders north of the site serve as overflow areas or storage ponds. In the area of the proposed project site as well as in the grass marsh area adjacent to it, there appear to be distinct divisions into fresh and salt water zones, evidenced principally by the flora of the area. In the areas where storm waters are periodically ponded, sufficient leaching of salt from the surface soil has occurred to permit a vegetative succession from salt to brackish or fresh water marsh species. The two cut-off meanders north of Area A, which appear to be remnants of Salt Creek, retain water annually long after the cessation of precipitation and runoff, suggesting the possibility that the groundwater table underlying them remains at a fairly high level throughout the year.

2.37. A triangular parcel (\pm 6 acres) just north of the proposed open space/wildlife reserve is connected to the marsh by a 12-inch diameter corrugated metal pipe that is embedded in the Northwestern Pacific Railroad embankment. Plate 14 indicates project area drainage facilities. Runoff from the triangular area drains into the northern sector of the proposed permanent marsh. This small parcel, although hydrologically related to the gross sub-basin, has little significance in the overall performance of the existing or future drainage system.

2.38. Groundwater. Groundwater is perhaps the most difficult of the water-associated elements to assess in terms of present character and role in the resource complex of the proposed site. Subsurface conditions in this area are not conducive to the production of large amounts of water from wells. Although the water table is probably close to the ground surface throughout the area, only limited alluvial deposits are present, and the two major soil and rock units are relatively

poor water sources. The Bay Mud materials are relatively impervious silty clay, and the only source of water within these deposits would be thin interbeds of sand. Even if limited amounts of water could be developed from these deposits, the quality would be questionable. Because of seasonal elevation differentials between the water table in the tidal sectors of this area and the isolated marsh just north of the project site, a groundwater exchange takes place and saline water intrusion into the materials underlying Areas A and B probably occurs. Although there is no evidence to support this, the physical conditions necessary for such a phenomenon to occur exist at some time during the year. Some interaction between the groundwater levels at the site and the dredged material disposal operation on the adjacent Muzzi property is likely. A temporary artesian aquifer condition may have been created by the surcharge effect of the mass of soil and water on the adjacent property. During 1976 meanders and drainage channels, which would normally have been dry because of the dry winter, were observed to have one to three feet of water. The true environmental role of the water stored in the respective aquifers of the area remains obscure, since no beneficial use has historically been made of the groundwater.

2.39. Water Quality. The quality of storm runoff is affected by litter, lubricating oils, pesticides, asphalt, animal feces, and other waste materials typical of urban areas.

2.40. A single sampling of marsh sediments and standing water was made in February 1976 to characterize the degree of contamination in the marsh. Runoff samples were not taken from the marsh area during a storm (due to a very dry winter during the study period) and do not fairly represent average conditions over an extended hydrologic cycle. Samples of standing water were taken at the north end of San Clemente Drive and near the outfall pump station. The total dissolved solids (TDS) content at about 15,000 mg/l places the water in the "very brackish" category. (Sea water by comparison has a TDS value of about 34,000 mg/l.) Comparison with typical values for urban runoff shows the standing water in the marsh to be of superior quality. The high grease content contained in the sample taken in the north-south drainage ditch near San Clemente Drive probably is the result of incidental commercial drainage from the automobile service establishments located along Paradise Drive whose floor drains and other surface drainage flow into the marsh.

2.41. The role of the marsh is significant not only in reducing the potential biochemical oxygen demand (BOD) on San Francisco Bay receiving waters, but also by serving as a trap for undesirable storm water constituents.

2.42. San Clemente Creek is a dead-end slough to the southwest of the proposed project site. Background water quality data for San Clemente Creek is sparse. Historically, the slough once received the untreated wastes of Marin County Sanitary District No. 2. It now serves as a channel for pleasure boats and limited water recreation.

Existing Waste Disposal

2.43. Sewage. Corte Madera is served by Marin County Sanitary District No. 2, which administers the collection and transfer of liquid wastes to the Marin County Sanitary District No. 1 sewage treatment facility on the San Quentin Peninsula for treatment and disposal. Sanitary District No. 1 performs these treatment and disposal operations under a contract which allows for a maximum average daily flow of 1,175,000 gallons per day (1.175 MGD). District No 2 is approaching this capacity and will be required to negotiate a new contract when they exceed the contracted flow.

2.44. The existing treatment facilities of Sanitary District No. 1 provide secondary treatment, with 85 percent removal of BOD (biochemical oxygen demand) and suspended solids. Total capacity is approximately 4.5 MGD, while the average current flow is about 4.2 MGD.

2.45. Sanitary District No. 1 is now under a cease-and-desist order of the San Francisco Regional Water Quality Control Board for two problems: the amount of particulate matter in their outfall and the Sanitary District's need to bypass treatment facilities during periods of high storm flows. The first of these has been solved, but the problem of storm overflows persists.

2.46. The cease-and-desist order does not apply directly to Sanitary District No. 2. Thus, there is no limit on new connections except as imposed by the current contract. However, Sanitary District No. 2 is experiencing infiltration problems in its sewers. This is the leaking of groundwater into the system, which increases the flow and decreases the excess capacity available under the contract. District No. 2 is currently studying the problem areas of its system and is attempting to eliminate this infiltration.

2.47. The sanitary facilities of Marin County are being studied for possible consolidation. One possibility is that San Quentin would share treatment facilities with Corte Madera and that both would share a common outfall with San Rafael.

2.48. Solid Waste. Solid waste from Corte Madera is collected by Mill Valley Refuse Service for disposal at the West Contra Costa County Dump in Richmond. All of the urbanized portion of the County from Corte Madera southward disposes of its solid waste at the West Contra Costa County Dump, while the urbanized portion of Marin County to the north of Corte Madera uses the Redwood Sanitary Landfill north of Novato.

2.49. Existing Water Supply. The Marin Municipal Water District (MMWD) serves the eastern part of Marin County south of Novato, including Corte Madera. The MMWD has a current annual safe yield of 23,000 acre-feet. The current consumption and existing commitment total

33,4000 acre-feet annually (Document A-30, Appendix A). MMWD has met some public resistance in its planning for new water sources, and current safe yield figures reflect the adjustments made necessary by the serious water supply problem of 1977, a drought year of record.

2.50. MMWD imposed a moratorium on new water connections during the spring of 1973. Under the conditions of the moratorium, only those projects which had already filed for water connections were to be considered for new connections and no water beyond a site's historical level of highest use would be permitted. For the Hahn site, this level would be defined by the water use of the Highway Patrol offices and the Maggiora/Ghilotti building, which together receive .86 acre-feet annually.

2.51. The District has instituted a water reclamation program which should yield up to 2,000 acre-feet annually within the next 20 years. Current reclaimed water is used on an emergency basis to water public landscaping. The District's planned SoulaJule Project will create a storage dam impounding 10,500 acre-feet and will increase the District's safe yield by 3,700 acre-feet annually.

2.52. In March of 1976 the MMWD imposed a program of water rationing. Increased rainfall allowed this program to be terminated in January of 1978.

2.53. Biological Resources. The marshes of the San Francisco Bay region are an important station on the Pacific Flyway. In the area in, around, and adjacent to the proposed project site, more than a hundred different species of birds have been sighted over the last five years.

2.54. Table 14 summarizes the existing wildlife habitat of the proposed project site and the area immediately to the north. Various "sections" of the proposed site are delineated on the drawings accompanying this table, in accordance with differences in vegetation or configuration. Each of these sections has been rated (Livingston and Associates, 1976) as to its present values as wildlife habitat on a relative scale of: low; medium; medium high; high; very high. It is emphasized that these are relative ratings only and compare each section with the others in the immediate area of the proposed project site.

2.55. The proposed site is blocked off from direct tidal action by flood gates at the railroad levee. The cutoff meanders north of the proposed project site are utilized for resting and feeding by a large variety of birds. The plant and animal species in and adjacent to the proposed project site are listed in Table 15. While these meanders support a great number of aquatic plants and animals, the species diversity is low, probably a result of the variable salinity. The edges of the meanders support salt-tolerant vegetation typical of salt marshes,

such as salt grass, alkali heath, and some pickleweed. The area around and between the meanders supports more typical grassland vegetation such as annual grasses, a variety of weedy species (dock, prickly lettuce, sheep sorrel) and some salt grass. As a whole, this area to the north of the proposed site has a high wildlife habitat value rating. Salt marsh plants are particularly important because they are highly productive and represent one of the vital first links to the numerous food chains in the Bay, as well as playing a role in helping to reduce water pollution.

2.56. Marshes and estuaries are among the most productive ecosystems in the world. This productivity, on the order of ten times that of agricultural land, occurs in the form of organic detritus (Odum, 1961).

2.57. A drainage ditch is contained within the northern limits of the site and another borders the railroad track. Both ditches are bordered by pickleweed and salt grass and a large stand of salt marsh bulrushes grows at the south end of the railroad ditch. Egrets, herons, and many other birds are frequently sighted in and around the ditches. The portion of the area south of the northern ditch is covered with typical grassland vegetation.

2.58. A very large population of meadow mice inhabits the grassland areas of the site. Just as productive marsh grasses are the basis of the food chain for shorebirds, the rodent population is the staple diet for raptors such as hawks and owls. These meadow mice make this site a critical area for the owls, hawks and kites. Meadow mice feed on succulent stems and the leaves of such forbs as dock and thistle, and they line their underground nests with dead grasses, all in plentiful supply here. House mice, ground squirrels, black-tailed jack rabbits and possibly the rare salt marsh harvest mouse inhabit the area. The habitat is also suitable for other animals such as lizards, frogs, gopher and garter snakes, and a variety of large insects.

2.59. The southernmost third of the project site (area 6 on Table 14) is a previously filled area colonized by grasses and forbs with 80 percent cover. The community stratification of flora in this area is still progressing toward a higher degree of grassland succession. If this portion of the site is left untouched, it can be anticipated that sometime in the future this area would approach a climax community status (Chan, Molina, and Ridge, 1972). Residents and users include black-tailed jack rabbits and doves. The area is given a habitat rating of "low".

2.60. To the east of the project site is the Muzzi Property, which is 225 acres of diked-off salt marsh. On the average, the area has a plant cover of from 20 percent to 40 percent, most of which is the salt marsh plant pickleweed. Because this area subsided to several feet below the original marsh elevation, it is flooded during the rainy season and

becomes an important rest and feeding area for a variety of shorebirds and many ducks. The wildlife habitat rating ranges from "medium high" to "low". The Muzzi property is the site of a marsh restoration project sponsored by the Golden Gate Transit District and aimed at restoring areas destroyed by dredge disposal during the building of the District's Larkspur Ferry Landing. One hundred and twenty-five acres of marsh would be restored here. The initial phase of this operation, the breaching of the levees, has already taken place.

2.61. The dike embankments surrounding and crossing through the Muzzi Property (Area B, Plate 2) have become a valuable wildlife habitat over the years. They support such plants as wild radish, wild anise and annual grasses, which provide food for small rodents such as meadow mice and ground squirrels. American coots feed on the plants, while owls, hawks and egrets feed on the rodents.

2.62. The Corte Madera-Larkspur marsh area supports one of the largest populations of anise swallowtail butterflies in Marin County. The adult anise swallowtail butterfly lays its eggs only on wild anise and the plant provides food for both larvae and adult (Berger, 1973). Both the proposed project site and surrounding areas have an abundant supply of wild anise.

2.63. Endangered Species. The Endangered Species Act of 1973 (PL 93-205), provides for the conservation of endangered and threatened species of fish, wildlife and plants. Two endangered species that appear both on the Federal (USFWS, 1974) and State (CSRA, 1974) endangered species lists are the Salt Marsh Harvest Mouse and California Clapper Rail. Both species inhabit the salt marshes surrounding San Francisco Bay.

2.64. In a survey conducted by the California State Fish and Game Department in 1971, a very small population of salt marsh harvest mice was found in the adjacent Heerdt Marsh. In December of the next year, lower jaws of this subspecies were found in the pellets of burrowing owls outside of two different burrows, both located on the diked area bisecting the Hahn property. While the presence of these bones is not conclusive in establishing the presence of salt marsh harvest mice in this area, it strongly suggests it, since the range of a burrowing owl, particularly in the winter, is not over one-fourth of a mile. Trappings by the State Fish and Game Department in January 1973 produced no salt marsh harvest mice in the area site - specific information is not available.

2.65. The California clapper rail is omnivorous, but feeds largely on animal material such as shrimps, crabs, aquatic insects and small fish. It builds its nest out of dead grasses and marsh plants in the upper areas of salt marshes. It has been seen most frequently in the Heerdt Marsh, but has been sighted in the Muzzi Property, the area adjacent to the project site. At present, however, only the Heerdt Marsh and possibly the San Clemente Marsh offer suitable nesting habitat for this rare bird.

2.66. Because of habitat destruction and pesticides, all raptors can be considered potentially endangered even though their names may not appear on the Federal and State listings. An important raptor dwelling in this area is the burrowing owl which has been classified as "status undetermined" by the Federal government (BSFW, 1973). This status is for those species or subspecies that have been suggested as possibly threatened with extinction, but about which there is not enough information to determine its status.

2.67. The white-tailed kite had been nearly exterminated by the 1930's by hunters. Since then it has been protected and has been making a successful comeback. A pair of white-tailed kites was first sighted in the area in 1968, and a pair now is frequently seen hunting over the entire proposed project area.

2.68. Visual Setting. Three hundred and sixty degree views occur at ground level through the entire proposed project area due to level land, low vegetation, and the more rugged topography of surrounding areas. To the south, views are dominated by Tiburon Ridge and to the west by Mount Tamalpais and the Greenbrae Hills. To the north, views are also dominated by the Greenbrae Hills as they gradually descend to Point San Quentin where the State prison acts as a focal point. Looking east across the bay, the Richmond-San Rafael Bridge and the hills of Richmond and Berkeley are major components of the view. Due to the low elevation of the site, the bay is seen only from the immediate shoreline areas.

2.69. The proposed project site, previously zoned for light industrial development, is currently untended and is marked by some dilapidated buildings, trash and debris. Although highly visible from the elevated residential area to the south, the proposed site is not highly visible from the immediately adjoining low areas. The site is visible from the elevated roadway of the U.S. 101 freeway.

2.70. Air Quality. The basin which the project site is situated in is surrounded by hills on the north, west, and south, and is open to the Bay on the east side. The Larkspur-Corte Madera bayfront provides the low level access for sea air. Because of cold air drainage to the valley floor and increased radiational cooling of the surface air, frequent strong, surface-based nocturnal inversions occur, particularly in the winter. In addition, the basin, with its high frequency of low wind speeds, the sheltering effect of the surrounding terrain, the reversal of wind direction with daytime up-valley and nighttime down-valley flow, and the high frequency of sunny days, has the potential for the frequent accumulation of pollutants in high concentrations.

2.71. Table A presents air quality conditions for Marin County in the year 1976. At the Marin Mall site, the U.S. 101/Tamalpais Drive interchange is the dominant feature affecting air quality. A serious problem involves emissions of organic compounds which substantially exceed

Federal guideline levels for the 6-9 A.M. period. Vehicles at speed generate nearly all of the organic compound emissions during this three-hour period, and only about 5 percent arise from vehicles at near-idle and from stationary source fuel combustion. For organics, motor vehicle speed is a significant air quality factor; higher average speeds produce less organics.

2.72. In order to realize significant, long-term controls over air pollution problems, it is necessary to evaluate an individual project's impact on a region-wide scale and in terms of cumulative effects. The Clean Air Act Amendments of 1970 require that all States submit an Implementation Plan to the U.S. Environmental Protection Agency (EPA), explaining control strategy which will be used to attain and maintain ambient Air Quality Standards. These Implementation Plans are the vehicles for drawing together a region's air quality planning efforts. Elements of the Plans must provide for land use and transportation controls, source monitoring, air quality monitoring, and a procedure for review, prior to construction, of the location of new sources of air pollution. In a revision to the State of California Implementation Plan the State Air Resources Board recommended to EPA that the San Francisco Bay Area be designated as an Air Quality Maintenance Area (AQMP) for particulate matter, oxidants, and sulfur dioxide. For each area designated as an AQMP, a detailed analysis of the area's future air quality will be performed. If this detailed analysis confirms that a national standard will not be maintained through 1985 or attained by 1980, a long-term maintenance plan will be developed. EPA and other air quality-oriented agencies will review the air quality impact of the subject activity in light of these plans.

Noise

2.73. General. Three primary factors are used to describe environmental noise and its impact on man: intensity, frequency spectrum, and variation with time.

2.74. The human ear is sensitive to a wide range of pressures and frequencies. The sound pressure level is given in decibels (dB).

2.75. The unit of measurement of frequency is the cycle per second, or Hertz (Hz). Most of the sounds heard in the environment do not consist of single frequencies but a range of frequencies, each with a differing intensity level. At the same time, human hearing is not equally sensitive to all frequencies, being most sensitive to frequencies between 100 Hz and 5000 Hz. A composite measurement of sound which combines reading from the whole range of frequencies and weights and ranges is used to describe the sound at a given place and a given moment. This number, called the "A-weighted sound level", is expressed in decibels (dBA).

2.76. A statistical description is used to characterize environmental noise. Normally expressed as the "level exceeded for a stated percentage of time," the statistical description is derived from data expressing the percentage of total time the noise level is between any two set limits. For example, noise levels exceeded 10 percent (L_{10}), 50 percent (L_{50}), or 90 percent (L_{90}) of the time can be derived from histograms of noise levels. The L_{90} level is sometimes called the residual or background noise level, and the L_{50} level is referred to as the average noise level.

2.77. Federal noise standards from the U.S. Department of Transportation (DOT) are presented in Table 16, and are based upon data on the physiological effects of noise plus community response data. These standards are design goals for traffic-generated noise and the predicted or measured noise level, L_{10} , is based on peak hour traffic.

2.78. Ambient Noise. The firm of Bolt, Beranek and Newman, Inc., of San Francisco, California, conducted an ambient noise measurement program at the proposed project site from 3 to 5 January 1973. These measurements consisted of a twenty-four hour sampling of the A-weighted sound levels at each of two positions as shown on Plate 7. Position 1 was on the railroad right-of-way approximately midway on the site; Position 2 was on a dike, approximately 1,250 feet due east of Position 1. Table 17 compares the L_{10} , L_{50} , and L_{90} levels for Positions 1 and 2 during a 24-hour period.

2.79. Plate 7 shows a comparison of the estimated existing L_{10} levels from the U.S. 101 traffic during the peak period evening rush hour between 6 p.m. and 7 p.m. with measured L_{10} levels at the time. The estimated levels are based on the peak hour traffic flow patterns. The L_{10} levels measured at Positions 1 and 2 were only 1-2 dBA from the estimated levels, therefore the projected levels can be considered accurate. The noise contours are straight lines because U.S. 101 presents almost a straight line noise source and the proposed site is flat, with no physical barriers. These estimated L_{10} levels do not exceed the DOT design levels shown in Table 16.

2.80. In general, the site noise levels are somewhat elevated because of proximity to the freeway. Under existing conditions, automobile traffic is the primary factor in terms of noise generation.

2.81. Historical and Archaeological Features. There are no State Historical Landmarks, State Points of Historical Interest, or Sites on the National Register of Historic Places (Federal Register, 7 February 1978, and monthly supplements) involved in the proposed center site.

2.82. The location of the proposed shopping center in historic times (i.e., 1850's) was marshland and part of the rich and extensive marsh and slough system of Corte Madera Creek. A field reconnaissance in 1974

by Archaeological Consulting and Research Services of Mill Valley, California, confirmed no natural landforms that might have served as fast land during the periodic tidal fluctuations in this marsh area. While the aboriginal inhabitants of this central portion of Eastern Marin County would certainly have utilized the abundant resources available from the general area, it seems unlikely that they used it for habitation purposes. A survey conducted by Ms. Barbara Correll in June 1976, had similar conclusions (Livingston and Associates, August 1976).

Social and Cultural Habits and Customs

2.83. Community Structures. Table 18 presents a compilation of 1970 U.S. Census data of housing characteristics for Corte Madera, Marin County and the San Francisco-Oakland Standard Metropolitan Statistical Area (SMSA). In the years since these figures were recorded, inflation and demand for homes in Marin County has increased substantially and it can be assumed that all home value figures have increased proportionately.

2.84. Both Corte Madera and Marin County have a higher percentage of single-family homes than the Bay Area as a whole. Although more dwelling units were owner-occupied in Corte Madera than for the Bay Area, the number of rented units has increased, with many single-family homes now being purchased for investment and rental purposes.

2.85. Homes values have increased substantially in the Bay Area with the median values in Marin County being somewhat higher than the median for the San Francisco-Oakland SMSA. The substantial size in home values and taxes, as well as the size of the cost of living in general, has made it difficult for low- and moderate-income families and the elderly on fixed incomes to live comfortably in Marin County.

2.86. U.S. 101 splits the community into two sections and constitutes a physical barrier between these sections. The majority of residents live west of U.S. 101. Planned residential projects will increase the relative population in the eastern portion. Social characteristics differ slightly, partly reflecting the age and type of the housing supply. The east side tends to be more highly family-oriented. At present, almost all community services and facilities (town park, library, recreation center, town hall, police department, junior high school and senior high school) are located or headquartered to the west. Present access between east and west Corte Madera is confined to the Tamalpais freeway interchange and to a narrow and isolated underpass adjoining the City of Larkspur to the north.

2.87. Recreation. National and State parks and Recreation Areas in this portion of Marin (Muir Woods, the newly formed Golden Gate National Recreation Area, Angel Island, Mount Tamalpais, Stinson Beach, and Marin Headlands) are mostly for hiking and picnicking. The 19-acre Paradise Beach Park, is located on the Tiburon Peninsula, about five miles southeast of Corte Madera.

2.88. Throughout Marin County there is an absence of level, open park lands suitable for general active recreation purposes. The few acres of level park land are comprised of the Corte Madera Town Park, a recreation area at San Clemente School in the east portion of town, and other small parks in Mill Valley, Larkspur and Tiburon.

2.89. Schools. The proposed project site lies within the Larkspur-Corte Madera Elementary School District, the Tamalpais Union High School District, and the Marin Community College District. The Larkspur-Corte Madera Elementary School District is not operating at capacity. There was a decline in the average daily attendance during the late 1960's (Hollis, 1973). The Tamalpais High School District was operating at capacity in the mid-1970's. The Reed School District, which has a school within the Town, showed a slight decline in the average daily attendance in the early 1970's.

2.90. Police and Fire Protection. Police services are provided by the Corte Madera Police Department, which includes a force of 14 sworn officers (1.75 sworn officers per thousand population). Residential burglaries and shoplifting are the Department's most common problems. There is a problem of the illegal hunting of waterfowl, enforcement is made difficult by lack of access to the hunting areas along the Bay shore.

2.91. In addition to the police protection afforded by the Corte Madera Police Department, the California Highway Patrol maintains a field office at the south end of the proposed project site on San Clemente Drive. The Patrol is now moving to new headquarters on San Clemente Drive, one block west of U.S. 101.

2.92. Fire protection is provided by the Corte Madera Fire Department's two fire stations. The main eastside fire station is about one mile from the proposed mall site. A westside satellite station, manned on a volunteer basis, is located on Paradise Drive about 0.7 miles south of the area. The Fire Chief considers the present level of protection to be inadequate and is preparing a Five-Year Fire Defense Plan for consideration by the Town Council (November, 1977).

Vehicular Circulation

2.93. U.S. Highway 101 Freeway. Appendix G provides a description of many of the major roads in the project area. The primary feature of the road network in the project vicinity is the U.S. Highway 101 freeway. The freeway, along with a number of major east-west roads which connect with the freeway, are the key elements of the road network in the area. Plates 15 through 18 show the locations of the freeway and the relative location of the major arterials and connectors.

2.94. U.S. 101 is constructed to freeway standards from the Golden Gate Bridge to a point north of Novato (about 5 miles northwest of the Marin Mall site). Through Corte Madera the freeway has four travel lanes in each direction. During peak rush hour periods, southbound between 6 and 9 A.M. and northbound between 4 and 7 P.M., one lane in that direction is reserved for car pools and buses.

2.95. In the Corte Madera area the U.S. 101 freeway has directional congestion during morning and evening commuter rush hours. During the morning peak period southbound traffic typically backs up from the Tiburon interchange to Corte Madera. Peak afternoon hour traffic conditions are summarized in the following table (figures represent a peak hour of 5-6 P.M.):

<u>U.S. 101 Segment</u>	<u>Level of Service*</u>
South of Tamalpais Drive	E
Tamalpais Drive to Industrial Way	D-E
Industrial Way to Greenbrae Interchange	C-D
North of Greenbrae Interchange	D

*Level of freeway service based on National Academy of Sciences, Highway Capacity Manual, 1965:

- C Good operation, stable flow, speeds greater than 50 mph.
- D Fair operation, approaching instability, speeds greater than 40 mph.
- E Poor operation, unstable flow, speeds about 30 mph.
- F Forced flow, freeway acts as storage for vehicles, speeds less than 30 mph.

2.96. Plate 15 summarizes 1976 traffic conditions for U.S. 101 and other roadways in the vicinity of the Marin Mall site.

2.97. The full cloverleaf interchange at Tamalpais Drive is located immediately to the southwest of the Marin Mall site. The interchange connects Tamalpais Drive to the west of the freeway with San Clemente Drive and Paradise Drive to the east of the freeway. The California State Department of Transportation feels that the full cloverleaf design of the Tamalpais Drive interchange contributes to serious weaving conflicts in both directions on the freeway and causes localized congestion through and upstream of the interchange (Livingston and Associates, 1977). Paradise Drive enters the interchange near the southern boundary of the Marin Mall site. Paradise Drive then arches around the cloverleaf, parallels the freeway for a short distance and then goes east along the shoreline of the bay into Tiburon. San Clemente Drive is an arterial which is less than one-half mile long and essentially provides a shorter route of travel from the interchange to the point where Paradise Drive turns east (that is, a shorter route than remaining on Paradise Drive).

2.98. Tamalpais Drive is an east-west arterial that extends about one mile from the freeway interchange to Redwood Avenue near the Corte Madera Town Hall. Tamalpais is two lanes on the freeway overpass and is four lanes to Pixley Avenue, which is about one-half mile to the west. Traffic signals are located at the Eastman Avenue crossing and at Madera Boulevard, which are about 1,000 and 2,000 feet, respectively, from the 101 freeway.

2.99. The next Highway 101 freeway interchange to the south of Tamalpais Drive is a similar cloverleaf which is located at the point where East Blithedale Avenue and Tiburon Boulevard converge on the freeway. This interchange is about 1.5 miles south of the Marin Mall site.

2.100. The Madera Boulevard interchange on U.S. 101 is a partial interchange with southbound on and off ramps only. It is located about 1,000 feet north of the Tamalpais Drive interchange. Madera Boulevard is perpendicular to the freeway at the interchange and then curves south to its intersection with Tamalpais Drive.

2.101. Fifer Avenue connects directly with southbound freeway on and off ramps at a point about 2,000 feet north of the Madera Boulevard interchange. The approaches here are controlled by stop signs; the area is quite congested during peak periods. Across the freeway from Fifer Avenue, Industrial Way provides on and off ramps for northbound freeway lanes. Except for the freeway access and the frontage road paralleling the Marin Mall site, the Industrial Way area is essentially isolated. The Fifer Avenue/Industrial Way area is characterized by primarily light industrial and commercial development.

2.102. The southern on and off ramps of the Sir Francis Drake Boulevard interchange are less than 1,000 feet north of the Fifer Avenue area ramps. Sir Francis Drake is two lanes east of the freeway interchange and is four lanes, with a median and left turn lanes at key intersections, west of the freeway. The northbound on and off ramps intersection is controlled by a "stop sign". The Larkspur Ferry Terminal is on Sir Francis Drake, immediately east of the interchange, and beyond this the road parallels San Quentin Prison and connects with State Highway 17 just west of the Richmond-San Rafael Bridge. To the west of the freeway Sir Francis Drake Boulevard serves Larkspur, Greenbrae, Kentfield, Ross, and San Anselmo.

2.103. In general, the potentially most dangerous situation under existing conditions is the fact that in the vicinity of the Marin Mall site there are a number of freeway interchanges within a very short distance. Conditions are most severe during peak periods, but even at other times weaving traffic creates a dangerous situation.

2.104. Major Arterials and Connectors. Based on the National Academy of Sciences' Highway Capacity Manual (1965), the following are the definitions for the service level codes which are applicable to an analysis of arterials and connectors:

<u>Level of Service</u>	<u>Description</u>
C	Good operation; occasionally vehicles may have to wait through more than one red traffic signal indication, and back-ups may develop behind turning vehicles; speeds on street segments greater than 20 mph.
D	Fair operation; vehicles may be required to wait through more than one red signal indication during short peaks within peak periods; no long-standing lines at signalized intersections; speeds on street segments greater than 15 mph.
E	Poor operation; some long-standing lines on critical approaches to signalized intersections; delays may be great - up to several red traffic signal indications; speeds on street segments about 15 mph.
F	Forced flow; represents jammed conditions where backups from down-stream traffic signals restrict or prevent movement of vehicles at up-stream intersections and, therefore, volumes carried are unpredictable; utilization of the approaches to intersection is prevented by outside conditions; speed on street segments less than 15 mph; delay will consist of at least several red traffic signal indications.

2.105. The following is a brief description of conditions (Livingston & Associates, 1977) for the major arterials and connectors in the project vicinity:

<u>Segment Considered</u>	<u>Service Level</u>
Sir Francis Drake Boulevard east of U.S. Highway 101	D
Sir Francis Drake Boulevard west of U.S. Highway 101	E
Bon Air Drive	C
Doherty Drive-Lucky Drive-Fifer Avenue	C
Nellen Avenue	C
Madera Boulevard	C
Tamalpais Drive-Redwood Avenue west of U.S. 101	C
Tamalpais Drive directly over the interchange and east of U.S. 101	D
Magnolia Avenue	D
San Clemente Drive	C
Paradise Drive south	C
Redwood Highway	C

2.106. Public Transit. The Golden Gate Bridge, Highway and Transportation District has authority to provide public transit throughout Marin County. It also provides express bus service to San Francisco from Corte Madera and from other points in central and southern Marin, as well as northern Marin and Sonoma County. Route 21 operates buses hourly from Robin Drive along Paradise Drive and Tamalpais Drive connecting east and west Corte Madera. Regularly scheduled ferry service to San Francisco is provided from Sausalito and from the new Larkspur terminal. A private company provides ferry service from Tiburon.

2.107. Bus stops at the Tamalpais Drive interchange are located on special pads in the middle of the cloverleaf interchange for both southbound and northbound freeway routes. Transit patrons must walk across the southbound loop on-ramp and follow a circuitous route through the interchange to get to their stop. In the northbound direction, the bus stop pad is located between the northbound off-ramp and loop on-ramp. From that point pedestrians can choose either to cross the northbound on-ramp and continue up the spiral ramp to reach the west side of the interchange, or they can chose to walk southeast crossing the northbound off-ramp to reach Paradise Drive.

2.108. Bicycle Traffic. There are no bicycle routes on Tamalpais Drive at its interchange with U.S. 101. Bicyclists must either walk or ride on the narrow sidewalk across the overpass, or they must share the roadway with automobiles. Such sharing is hazardous for the cyclist, partly because of the lack of bicycle lanes but also because of numerous conflicts with automobile traffic at the ramp merge and diverge points. An unmarked route used by students to reach Redwood High School is along the North Paradise Drive frontage road crossing under U.S. 101 at Nellen Avenue. Safe bicycling is possible south from Corte Madera to Mill Valley along a special bike path located immediately to the west of U.S. 101.

2.109. Pedestrian Traffic. Pedestrian circulation in the vicinity of the project site is limited. Access between east and west Corte Madera via the Tamalpais Drive overpass is hazardous because there is only a short segment of sidewalk on the south side, and pedestrians must cross the freeway on-and-off ramps or else use the spiral ramp structures located on the south side of Tamalpais Drive. This latter pedestrian route is essentially separated from moving traffic and consequently is much less dangerous, but the route is very complex, not signed, not readily visible to the uninformed pedestrian, not illuminated at night, and has potential for serious bicycle/pedestrian accidents on the steep spiral ramp. The graveled portions of the interchange area which are used as drainage swales could easily be confused with pedestrian paths.

3.00. RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS

3.01. Association of Bay Area Governments (ABAG). ABAG is a voluntary council of local governments formed to meet regional problems by cooperative action of cities and counties. All 93 cities and 9 counties in the San Francisco Bay Area can be voting members. Currently 87 cities and 7 counties (including Corte Madera and Marin County) are members. ABAG works toward solutions to regional problems, and it is the areawide comprehensive planning agency for the Bay region.

3.02. ABAG's Regional Plan 1970:1990 designates Corte Madera-Larkspur as a Community Center, and as such should center around a core of intense activity where commercial, governmental, cultural, recreational, health, and education services are provided. The other Community Centers in Marin County are San Rafael and Novato.

3.03. Marin Countywide Plan. The Marin Countywide Plan was adopted by the Marin County Board of Supervisors on 30 October 1973. The three basic goals of this plan are: to discourage rapid or disruptive population growth, but encourage social and economic diversity within communities and in the county as a whole; to achieve greater economic balance for Marin County by increasing the number of jobs and the supply of housing for people who will hold them--becoming more self-sufficient economically by reducing the present heavy reliance on the commute to San Francisco; and to achieve high quality in the natural and man-made environment, through a balanced system of transportation, land use, and open space.

3.04. Corte Madera-Larkspur has been designated in this Plan as one of four countywide community centers where employment and services used by people from throughout the county and beyond are concentrated. The Corte Madera-Larkspur center incorporates the proposed new regional shopping center, the ferry terminal, and the shopping complex west of the freeway, as well as connecting these with the San Quentin prison site, which may be reused as a park or residential area sometime in the future.

3.05. It should be noted that while the Countywide Plan is legally binding on unincorporated areas, it serves only in an advisory role to incorporated areas.

3.06. Town of Corte Madera General Plan. The Town of Corte Madera adopted a general plan on 21 July 1975, in accord with Section 65300 of California Government Code. This Government Code requires every city and county to prepare and adopt a comprehensive long-range general plan for all land within its jurisdiction and land outside its boundaries which bears relation to its planning. The Corte Madera General Plan prescribes goals and policies and established a framework to guide future growth and change.

3.07. The Land Use Element of the Plan designates the proposed project as part of a region-serving commercial/office/industrial area. Supplementary criteria developed to ensure consistency with Land Use Element policies are:

- a. Off-site improvement costs are to be borne by the developer.
- b. Permanent preservation of the 32-acre marsh which surrounds the two ponds shall be accomplished.
- c. Limit the development in the remaining 45 acres to not more than 670,000 square feet of leasable floor area.
- d. The permitted uses shall be limited to office and commercial uses and designed to compliment each other through the guidance of the Planned Development District process.
- e. Structures are to have a low profile enhanced by creative landscaping and reflect the aesthetic requirements imposed on the site by its position within the various view corridors between the bay and surrounding hills.
- f. No project is to be approved unless a satisfactory solution for the traffic generated by that use can be established and is proven to be feasible.
- g. No occupancy permit is to be granted for any development until the associated traffic projects have been completed to the point necessary to facilitate the proposed development.
- h. Require a long-term maintenance bond or other adequate guarantee against damage from future subsidence and related soils or physical problems that result from the proposed development.
- i. All changes to surface or subsurface drainage due to any proposed development shall be countered by properly engineered projects (which might include pumping facilities, raised dikes, etc.) to protect surrounding areas.

3.08. The Open Space and Conservation Element of the plan states in part that this area should be retained as open space, should have steps taken to improve the habitat condition, and, along with the natural habitat area of the Heerdt and Muzzi properties, should be unified and managed as a single entity. Also, the General Plan states that a goal is to preserve and enhance the small-town scale and character of the town.

3.09. A summary of the pertinent portions of the Circulation and Scenic Highways Element of the General Plan is found in Appendix C.

3.10. Zoning Ordinance of the Town of Corte Madera. Section 65860 of the California Government Code requires that a city's zoning ordinance be consistent with its general plan, and the Town is currently in the process of revising its ordinance to assure consistency. At present, the proposed project site is in the C-2 Regional Shopping District which permits the uses, building bulk and heights, and number of parking spaces being proposed by the developer.

3.11. Larkspur General Plan. The Larkspur city limits from the northern boundary of the proposed project site. Larkspur's General Plan does not specifically discuss the project site. It does call for mixed-use development on the city's two major vacant parcels, the 60-acre Schultz property and 120 acres on the San Quentin Peninsula. Possible uses would include commercial, office, residential, park, and open space. There are no current proposals for the development of the Schultz property, but a plan has been approved for the San Quentin Peninsula site (Larkspur Landing). The General Plan calls for the reservation of the entire Northwestern Pacific Railroad right-of-way as a mass transit corridor.

3.12. Golden Gate Bridge, Highway and Transportation District. The District has the expressed policy of preserving the Northwestern Pacific Railroad right-of-way for future mass transit use.

3.13. Summary. It appears that the proposed activity, as it is currently planned, is not entirely in conformance with the Town of Corte Madera General Plan. The primary point of non-conformance is that the applicant has offered 28.5 acres of mitigation lands and the Plan indicates that 32 acres shall be put into permanent preservation (Kautz, 10 November 1977).

3.14. The General Plan states that "No project is to be approved unless a satisfactory solution for the traffic generated by that use can be established and is proven to be feasible." Apparently the town can give approval for the project if an adequate plan for traffic has been prepared; however, the completed shopping center could not be put into use until the traffic improvements are actually completed (Kautz, 10 November 1977).

3.15. Although building height requirements are not directly related to conformance with the Town of Corte Madera General Plan, it should be noted that the project is not now within site height limits and that the town may shortly adopt a new Zoning Ordinance which might limit building height to 35 feet on this site (Kautz, 10 November 1977). If this does occur, the applicant may attempt to obtain a variance. If this is not possible, he may consider redesign to meet the height limit (Jensen, 14 November 1977).

4.00. THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Economic Impacts

4.01. Employment and Population. Employment related to the development of the proposed shopping center would include (1) short-term construction jobs, (2) longer-term employment within the shopping center, and (3) employment by firms supporting the shopping center. Building trade employment throughout California has experienced a shortage of new work, and existing labor would suffice for construction. No growth is expected in Corte Madera because of this shortterm labor. Assuming a two-year construction period, it is assumed that 239 full-time construction jobs would be created with a payroll of \$10-\$12 million. The center would create 1,200 to 1,400 jobs in sales, maintenance, and management. There would be some population impact from this growth. There should be an increase in business for firms who would trade with Marin Mall, but local firms should be able to accept this business readily without increasing their existing staffs (Livingston, 1976). Some merchants might suffer loss in business resulting in the loss of jobs.

4.02. Marin Mall would not be growth-inducing beyond the number of persons employed by the Mall itself. The annual payroll of the Mall would be approximately \$10 million (Livingston, 1976).

Impact on Retail Commerce

4.03. General. Marketing data appear to indicate that the southern Marin County area could support an additional regional shopping center. Data also suggest an estimate that 800,000 to 1,500,000 square feet of shopping area can be supported by projected market demand. (Lord & LeBlanc, 1976). In the analysis, future demand is based on expected future population growth and some measure of growth in projected real per capital income (see Tables F and G).

4.04. Impact on Existing Retail Facilities. Early analyses of the original Hahn proposal considered the impact of a much larger shopping center, on the scale of the Stanford Shopping Center in Palo Alto. Such centers draw on wider marketing areas than the proposed center and justify discussions of "capturing" business leaving Marin County for other markets, especially San Francisco. This kind of consideration is no longer considered appropriate to the smaller current proposal. Marin Mall would introduce a different kind of merchandising service than is now available in southern Marin County. Existing facilities might expect a shift in market patterns. The existing Corte Madera Shopping Center, while offering a different kind of merchandising than the proposed district might also expect significant impact. But it is difficult to predict how great the impact would be in either case; to some

extent this depends on what actions these areas take to remain competitive. Downtown San Rafael has already undertaken a downtown development program, seeking to attract another anchor store and to provide expanded facilities for their present anchor (Macy's). Corte Madera Shopping Center has recently changed its management and is exploring plans for modernization of its facilities. Northgate Mall, located approximately 7 miles north of the proposed Marin Mall, would experience some small decline in business because of this new competition, but it is noted that the principal markets of the two centers are somewhat different.

4.05. Fiscal Impacts. Ernest W. Hahn, Inc. has estimated that Marin Mall will have a market value of more than \$40 million and will generate in excess of \$55 million in retail sales each year (Livingston & Associates, 1977). The firm of Lord & LeBlanc has made an independent calculation (1976) and estimated full market value from \$31 to \$47 million and retail sales volumes of \$50 to \$67 million annually. In a broad sense, 16 local jurisdictions could experience changes in their budgets, including increases in their ad valorem property revenues.

4.06. The economic consulting firm of Lord & LeBlanc prepared a 1976 report on the potential economic impacts upon local jurisdictions. Their "best case"/"worst case" analysis for Corte Madera concluded that in the worst case set of assumptions, the Center would generate \$640,142 in revenues to Corte Madera. In the same worst case, if all projected municipal costs (\$309,165/year) were charged against the project, there would still be a \$330,977 net annual benefit to the town.

4.07. In the best case set of assumptions, the Center would be expected to generate \$868,264 in annual revenues to the town. If all projected municipal costs (\$309,165/year) were charged against the project, there would be a \$559,099 net annual benefit to the town.

4.08. The Mall would be a major property tax revenue source to Corte Madera, providing 25 percent of the town's total assessed value. The significant impact would not be to increase property tax income, however, since California law fixes school taxes to enrollment levels. The principal effect would be to lower local tax rates, assuming normal increases in local spending. The actual value of the finished development has been considered independently by Lord & LeBlanc from developer's information, and computed in the early operational phases at \$31,089,522 and in "ultimate development" at \$47,040,000. This compares to the developer's figure of \$40 million, implying an assessed valuation (AV) of \$10 million. Based on Town tax rates of \$1.39/\$100 AV and rates for other jurisdictions equaling \$9.788/\$100 AV, the town would collect \$163,464 per year and other jurisdictions would collect about \$1.5 million. These other jurisdictions include those shown in Table H.

4.09. Income from sales and use taxes are shown in Table G. Tax revenues from sources other than sales and property tax are shown in Table H.

4.10. Impact on Land Use. The project site is transitional between commercial development and protected open space. There are several highway-oriented uses in the area such as restaurants and auto agencies. The project does not introduce an entirely new land use to the area and would add to the commercial strength of the area.

4.11. The site has a combination of physical advantages which make it commercially attractive for development of a regional shopping center. It has easy access and excellent visibility from the area's major freeway. On its east side, it is next to a reserved corridor for mass transit lines. It is well-located within Marin County's largest retail market area.

Geological Impacts

4.12. Settlement. The principal geologic problem or hazard in the project site is the presence of weak, compressible soils underlying the flatland portions of Corte Madera. The technique of introducing fill material by end dumping (dumping from trucks) inevitably leaves piles of fill on a site for some period of time before they can be smoothed into a uniform layer of fill. During this period, settlement starts and results in uneven settlement.

4.13. Another problem of land fill on Bay mud is the possibility of mud waves. The current proposal calls for permanent fill about seven feet thick; the surcharge would run from 5, 10, and 20 feet for various sections of the site. The thickest, heaviest surcharge fill and thus the greatest risk of mud wave generation is planned for the northerly end of the property, where it will be 20 feet thick. This surcharging program has been assigned a safety factor of 1.05 (1.00 indicates failure is impending and greater numbers show a greater margin of safety). There should be no problem with areas of 5 and 10-foot surcharge, but the 20-foot surcharge "is marginally safe (Livingston and Associates, EIR)." An alternative would be either (1) to increase the factor of safety by using a lighter load for a longer period to achieve the same settlement or (2) to accept the low safety factor and institute a vigorous and accurate program of monitoring during the surcharge period so that, if settlement were too rapid or failure threatened, the surcharge could be removed quickly from the project site or redistributed.

4.14. The placement of fill over bay mud will undoubtedly cause settlement or sometimes even failure of the underlying ground. When fills are placed over thick bay mud deposits, relatively great settlements take place. Though most of the settlement takes place within the first few years, settlement continues for as long as 100 years. Where

great differences in thickness of the mud exist over short lateral distances, differential settlement can be a problem. If, for example, the site is underlain by as much as 100 feet of Younger Bay Mud (as it the case in certain areas of the proposed site) then fill placed on top of the mud would settle significantly over a period of many decades. The total settlement would be quite large; a thickness of ten feet of fill, for example, would eventually settle on the order of 5 or 6 feet (Sedway, Cooke, 1973).

4.15. Methods are available to control the rate of settlement and otherwise minimize the effects on structures, utilities, and other site developments, and many Bay fill projects which have been carried out using these techniques have performed satisfactorily. However, extensive investigations are necessary at the outset of such a project, and satisfactory performance can be reasonably expected only if the entire project is carried out in accordance with a well conceived technical plan. Even after placement of a satisfactory fill, special, expensive measures are required for the foundation support of many types of buildings.

4.16. Existing developments within the Bayshore areas of Corte Madera have generally been carried out on a project-by-project basis, and problems due to settlement are widespread. Differential settlements in the range of six to eighteen inches or more have occurred in some areas, especially where new fill has been added adjacent to areas of older fill. This is a very undesirable settlement condition potentially can result in damage to utilities, roads, and structures.

4.17. The weight of the compacted fill to be placed over the proposed settlement project site would result in excessive differential settlement across the site due to different thickness of soft mud and moderately firm mud. The estimated ultimate settlement due to permanent filling within the planned building area ranges from approximately 20 to 50 inches (LeRoy Crandall & Associates, 1972).

4.18. The feasibility of the project depends upon preconsolidating the site with surcharge fill to decrease the differential settlement to amounts which can be tolerated by one and two-story structures. The scheme for surcharging the site as detailed below was developed by LeRoy Crandall and Associates, of Los Angeles, California, consulting engineers for the applicant. This scheme would minimize differential residual settlement across the building after the removal of the surcharge fill to less than one-half inch between adjacent columns or on the order of two inches over a distance of 100 feet (columns on 25-foot centers).

4.19. Soils beneath the site vary from isolated layers of sand with rapid consolidation characteristics to clays with very slow consolidation characteristics. The time required for the areal settlement to occur would be governed by the thickness of the various compressible

deposits. This condition is illustrated for the soil conditions at Boring 13 of the time-settlement curves on Plate 9. The estimated ultimate settlement at the location of Boring 13 due to the placement of seven feet of permanent fill is 38 inches. After applying an additional 15 feet of surcharge fill for a period of 12 months, 22 inches of settlement would occur, leaving an estimated residual settlement of 16 inches. To completely eliminate future areal settlement due to the required grading would require either a very large surcharge or a much longer period of time.

4.20. The construction of the proposed two-story buildings on final grade would develop an approximate volume weight which would include the first and second floor concrete slabs with their respective structural steel columns and beam framing members and the roof. This mass would convert to approximately 145 pounds per square foot, with an additional weight of approximately 15 pounds per square foot for exterior walls with footings and foundations. A total weight of 160 pounds per square foot for the two-level structures would be equivalent to the weight per square foot of one and a half feet of surcharge fill. The depth of surcharge would vary from 5 to 20 feet over the site area, thus the weight of a square foot of surcharge would vary from 550 pounds to 2,200 pounds depending on location within the site.

4.21. The estimated ultimate settlement for the amount of permanent compacted fill required at the boring locations within the building area is shown on Table 19. To develop this table, the weight of the floor slab and building load was assumed to be equivalent to two additional feet of compacted fill. In estimating the settlements for the southerly portion of the site, consideration was given to the fact that the existing fill has been in place for approximately two years, and a portion of the consolidation due to that fill has occurred. A monitoring program to observe the rate and magnitude of actual settlements would be established. Depending on the findings of this monitoring program, adjustments would be made in the surcharge loadings by moving surcharge from areas of more rapid settlement to areas of slower settlement.

4.22. Effect of Fill on Adjacent Areas. The nearest surcharge fill to the northbound lane of U.S. 101 would be five feet high and approximately 150 feet away. The maximum surcharge fill of 20 feet would be approximately 350 feet away from U.S. 101 at its nearest point. The surcharge fill would extend at the recommended height for 20 feet beyond the building area in plan and then slope no steeper than 6:1 (horizontal:vertical) beyond the main building area.

4.23. If the grading is performed as outlined above, the possibility of mud waves developing on the site itself would not be great. Because of the relatively great distance from the edge of the surcharge fill to the edge of the highway, the possibility of any mud wave affecting the highway would be more remote. Settlement of the existing roads due to

the surcharge fill would be expected to be inconsequential since the upper bay mud layer underlying the highway is well beyond the area where the stresses due to the surcharge fill would be significant.

4.24. Seismic Hazards. Distinct from the difficult but predictable problem of settlement is the potentially serious hazard of seismic action in Bay lands. In addition to major shifts in large areas of ground during an earthquake, the shaking of the ground often causes soil particles to shift and settle in relation to each other. If the silts and sands that are being shaken are loose and saturated with water, the water in the materials will be forced out as the particles settle together. As the water flows out, it disturbs the sand particles with the result that the entire soil may become fluid. This is the phenomenon known as liquefaction.

4.25. Another cause of damage in an earthquake is the shaking of the buildings. It is generally believed that buildings on solid rock foundations are shaken less severely than buildings on softer material. Analyses of the reaction of soils to strong ground motions in the earthquakes in Alaska and Niigata, Japan, in 1964, indicate that soft-ground shaking in those major earthquakes may actually have been only about 50 percent stronger than in adjacent rock areas (San Francisco Bay Conservation and Development Commission, 1969).

4.26. Although ground rupture along active fault lines is perhaps the most widely publicized form of earthquake ground failure, secondary ground failures triggered by ground shaking are more widespread and no less hazardous occurrences during earthquakes. Ground failure in the form of lurching, cracking, formation of "sand boils," etc., is a significant possibility during major earthquakes within areas of filled ground overlying former Bay lands. The danger is especially great in areas where the ground is not flat, such as adjacent to ditches, sloughs, and edges of fills. Where deposits of loose sand exist within the upper portion of the Younger Bay Mud, liquefaction may occur.

4.27. Owing to the location of several known active faults within the region, the site could be subject to intense, seismically-induced shaking in the future. The geologic and seismic conditions at the site indicate that such intense shaking could produce some consolidation of the non-engineered fill and Quaternary sediment beneath the property. As no known faults exist within or beneath the site, the possibility of damage to structures by direct ground surface rupture along a fault trace within the area appears to be remote (James E. Slosson & Associates, 1973).

4.28. No loose fine sands, which are the most susceptible soils to liquefaction, were encountered on the project site. Where sands did occur, they were quite deep and generally dense within the Older Bay Mud. Sandy silts were encountered within the Younger Bay Mud or within the transition zone between the Younger and Older Bay Mud at only five

locations. The clay soils which constitute the vast majority of the soils beneath the site possess a very high resistance to liquefaction. The raising of the proposed project site with compacted fill will improve the resistance of the underlying soils to liquefaction by consolidating any pockets of cohesiveness and liquefiable soils that may exist (LeRoy Crandall & Associates, 1974).

4.29. Any development in the coastal zone should consider the possibility of inundation by seismic sea waves (tsunamis). As the local faults primarily experience lateral motion, it is unlikely that an earthquake on any of these faults would produce a seismic sea wave. However, a Department of the Army Study (1975) indicates that the 100-year runup and the 500-year runup due to tsunamis of distant origin would be 4.9 feet (m.s.l.) and 8.3 feet (m.s.l.) respectively in the project area.

4.30. If a major event should occur on the San Andreas Fault near the property, there is a remote possibility that the site could be subject to tectonic movement resulting in a slight decrease in elevation. This elevation decrease would most likely be on the order of few inches and would be uniform throughout the site. Such minor and uniform elevation changes should not be harmful to any structures within the property (James E. Slosson & Associates, 1973).

4.31. The potential effects of seismic events on public utilities and roads should be minimal as the utilities and roads would be placed directly into or on top of new fill. The fill would act as a mat, and light structures with conventional footings resting on this mat should not ordinarily settle differentially during a major earthquake (San Francisco Bay Conservation and Development Commission, 1969).

Hydrological Impacts

4.32. Drainage. The development would alter the present hydrological configuration of the area, probably resulting in increased runoff. The net effect of the project runoff on the Eastside Outfall watershed would be a 10 to 13 percent increase in volume. About 20 acres of former wetland used for temporary storage of excess storm water runoff with a capacity of 50 acre-feet would be lost, reducing total capacity by 30 to 40 percent and making it impossible to impound a 24-hour, 50-year design storm. (Drainage pump failure is assumed.) (Livingston & Associates, 1977). An engineering consultant for the applicant, Oberkamper and Associates, indicates that the proposed ponding and pumping system and related drainage improvements will protect U.S. Highway 101 from flooding. To insure that the State Department of Transportation will be able to comment on the final drainage plan, they will be sent copies prior to final approval (Coleman, 8 November, 1977).

4.33. Water Quality. The quality of the runoff would become typical of a commercial-urban area, largely due to contaminants flushed from paved areas. The runoff produced within the site would contain various quantities of organic detritus and suspended sediment. Of the identified processed contaminants, oil and grease and minor pesticide residues appear to present the greatest potential problem of environmental degradation.

4.34. Final project design should, either by provisions of a treatment facility or by other means, ensure that drainage water quality does not fall below acceptable levels (also, see paragraph 1.30).

Impact on Waste Disposal

4.35. Sewage. Livingston & Associates have estimated that about one gallon of liquid waste is expected to be produced each day for each eleven square feet of gross leasable space in the shopping center. This constitutes about 47% of Marin County Sanitary District No. 2's 0.129 MGD (million gallons per day) reserve capacity that it can utilize before reaching its contract maximum. Because Marin Mall's sewage production would be only about 1 percent of the sub-regional total, the impact on the treatment plant operation and the quality of the receiving waters would be slight. Corte Madera Creek would have some increase in basic algal nutrients (nitrogen and phosphorus) as well as a minor amount of toxic heavy metals and other undesirable elements commonly found in wastewaters which are not removed during conventional sewage treatment.

4.36. Solid Waste. Solid waste associated with a large shopping center consists primarily of large packing cartons and packing material such as foam pebbles and shredded paper. Based upon experience of other regional shopping centers of a size and tenant type comparable to the proposed center, the disposal rate would be estimated at 5 to 7 tons per day.

4.37. Paper is in short supply, especially corrugated cardboard which would be one of the major solid wastes of these commercial facilities. Recent construction of department store buildings now makes provisions for baling and compacting equipment. This recycling normally associated with commercial wastes may reduce the estimated disposal rate.

4.38. The solid waste material from the proposed center would likely be disposed of at the West Contra Costa Sanitary Landfill in Richmond, California. The impact on the life expectancy of the landfill is difficult to estimate because of the rapidly changing technology of recycling and other disposal techniques.

4.39. Impact on Water Supply. Ernest W. Hahn, Inc. applied to the MMWD for a Pipeline Extension Agreement on 26 May 1973; but approval was

not granted before the water moratorium ordinance went into effect. The MMWD has advised that they will be unable to provide water to the proposed center in the foreseeable future (Document D-8, Appendix D).

4.40. The MMWD moratorium permits new developments to use water up to the historical maximum use for a site. Therefore, until the moratorium is lifted, the Marin Mall site will be limited to 0.86 acre-feet yearly, the amount now used by the State Highway Patrol Offices and the one small industrial building on the northern end of the site. Projected water consumption of Marin Mall will depend on the precise mix of development. Consumption is expected to be in the range of 75-85 acre-feet annually (Livingston, 1976). But actual useage may vary considerably; e.g., restaurants consume 0.9 acre-feet each year per 1,000 square feet of floor area, while retail shops consume only 0.02 acre-feet per 1,000 s.f.

4.41. Energy. Electric power for Marin Mall may be supplied from P.G.&E's Greenbrae Substation, which has a capacity of 60 KV. Development of the shopping center would require expansion of this substation to 115 KV and the addition of a new 115 KV transmission line unless alternate power sources were developed. P G & E now has plans to upgrade the substation sometime around 1980 or 1981 (Horst, 1977). Marin Mall is expected to consume 16.75 million kilowatt hours of electricity per year, based on a Southern California Edison Company standard of 25 KWH per square foot for shopping centers. Some 20 billion BTU of natural gas could be consumed annually, which would make the development one of the highest single users of energy in Corte Madera. It is important to note that energy use projections can vary greatly depending upon building type, efficiency of mechanical systems, individual comfort index, type of insulation, etc., and that the status of Marin Mall design details at this time makes it impossible to calculate an accurate energy consumption figure (Livingston, 1976).

4.42. Impact on Vegetation and Wildlife. Any development on the project site would destroy wildlife habitat. The habitat area that would be lost, should the proposed project be completed, consists of approximately 45 acres to be filled and 12 acres that have previously been filled. Of this 45 acre area, approximately 20 acres contain some marsh plants and grasses with 100 percent plant cover and is rated (Livingston and Associates, 1976) "high" as a wildlife habitat (Table 14). Approximately 4.5 acres of channels and banks have 90 percent cover ("medium-high" rating). The 12 acres of land previously filled consist of grasses and forbs with residents including black-tailed jackrabbits and doves. This area has a "low" habitat value rating.

4.43. In the current proposal, the two cut-off meanders north of the project site would not be filled. The ponds and surrounding area have been offered to Corte Madera for a wildlife habitat, open space, and storm runoff treatment area. The developer has indicated that he may

agree to treat water entering the pond so that water quality will not go below current levels. The Town would be responsible for improvement in the wildlife area and establishment of a wildlife management program. The established elevations of the meanders do not allow total drainage, and the meanders have some water in them all year. As the water in these meanders is very important to many species of wildlife, the necessary water control should be provided to maintain an adequate water level in the ponds.

4.44. Visual Impact. Present plans call for the shopping center buildings (except for the theater) and connecting pedestrian malls to cover a land area of about 1,250 feet by 550 feet, with the longer dimension parallel to the freeway. Mall shop buildings would be about 20 feet in height, and the two department stores would be about 42 feet high. Building facades would be light stucco and timber with tiled mansard roofs. Windows would have dark glass framed in anodized aluminum. Colors would be earth tones. These buildings would be set back from the freeway about 250 feet. The theater, which would occupy a land area of 150 feet by 100 feet, would be located on the southwestern part of the site, adjacent to the Tamalpais Drive freeway on-ramp. The shopping center buildings would be surrounded by parking lots (Livingston, 1976).

4.45. Although set back a considerable distance from the freeway, the shopping center will be prominently visible from both the freeway and the Tamalpais Drive overpass. Some views to the Bay will be blocked or altered, through the Town's General Plan establishes its policy of protecting Bay views. Because the project will consist of separate building masses broken by pedestrian malls, the center will not present a solid wall effect when viewed from nearby areas. Present plans call for screening parking lots with plantings, walls, or fences; but the height of these screens has not been set and consequently the extent to which they will screen cars cannot be determined. Earth berms are no longer proposed because of potential soil conditions and underground utilities problems. If not landscaped, the visual impact of walls or fences could be as harsh as viewing parking lots. The amount and locations of landscaping within parking areas and around buildings has not been set. If plantings are not generous, the visual impact of pavement and structures also will be harsh (Livingston, 1977).

4.46. The siting of the theater apart from the central building mass would be disconcerting to the viewer; the site appears to have been chosen to achieve maximum visibility from the freeway. Since movie theaters most often rely on large signs or marquees to advertise current and future attractions, the theater would be a significant visual component of the site, probably more prominent than necessary (Livingston, 1977).

4.47 As shown in Figure 18, the shopping center would be visible from many of the higher elevations of Corte Madera. Sunlight reflected from parked cars, as well as night lighting, could be disturbing to the viewer. Pedestrian views would change in character.

4.48 Impact on Air Quality. Table B presents air pollutant concentration data for various situations at the proposed project site. As described in Appendix B, the air quality data is based on Bay Area Air Pollution Control District methodology and is, for the data in Table B, based on a square kilometer grid including the shopping center site, the Highway 101 interchange, and commercial areas to the west of Highway 101 (refer to Figure 1, Appendix B). Five different situations have been considered for the square kilometer area; (1) 1976 air pollutant levels with the Marin Mall, (2) Projected 1985 activity levels without the Mall; (3) Projected 1985 levels with the Marin Mall; (4) Projected 1985 levels without Marin Mall and considering two additional freeway lanes (De Leuw, March 1967); and (5) Projected 1985 levels with Marin Mall and the two additional freeway lanes. Although the addition of two lanes to Highway 101 has been considered in the De Leuw, Cather and Company report on the Transportation Element for the Marin Mall Impact Report, the proposed shopping center plan does not include this feature. It has been considered, however, in this analysis because it reveals that increased vehicle speed on Highway 101 (due to more traffic lanes) would result in decreased emissions from motor vehicles. This is significant because 85 percent of the total emissions in the project area would result from motor vehicles.

4.49 From among the pollutants considered in Table B and for all the alternative situations considered, a standard is exceeded only for organics. In relation to this it is significant to note that the 1976 concentration exceeds the Federal standard by almost ten-fold, and that the concentrations in 1985 are predicted to be less than 1976 under all four alternative situations. This prediction is primarily based on expected stricter air pollution laws and improved technology in terms of vehicle emission controls. Both of these situations may occur by 1985, but on the other hand neither one may occur by 1985. The figures presented in Table B should probably be viewed as optimistic predictions, yet ones which are based on generally accepted emissions factors used in the Bay Area.

4.50 Table C presents air pollutant concentration levels which would result ten kilometers downwind from the project site due to the local concentration as shown for each pollutant and alternate for the square kilometer grid in Table B. Table C indicates that pollutant concentrations ten kilometers downwind would be very minimal and would in no case represent a significant percentage of the standard. The air quality standard is, however, not particularly relevant in terms of evaluating a single-project concentration on a regional basis.

4.51 In summarizing the air quality data presented, a comparison of the figures for Alternatives two and three in Table B is perhaps the most meaningful measurement of the impact. Although concentrations may be

higher because of the reasons given in paragraph 4.49 or may otherwise be affected by additional freeway lanes, the increment actually added by the project (Alternate three concentrations minus Alternate two concentration) is a good indicator of the relative impact. Table D presents the project impact in terms of this comparison. This Table indicates that the project added impact for four of the five pollutants is not a significant increase as compared to existing levels and is even a less significant increase when compared to the standards. The one exception is organics: here the project added increase would be 50 percent of the standard. In evaluating the impact on organic air pollution, however, the fact that the project added increment represents only about 5 percent of the 1976 concentration and the fact that organics concentrations now exceed the standard for most stations in the Bay Area should be considered.

4.52. Noise Impact. In order to determine the vehicular noise impact generated by the shopping center on the area adjacent to the site, the following assumptions were made (please note, some figures may be out of date, but general impact is still valid estimate):

a. San Clemente Drive would be extended through the project area over part of the railroad right-of-way. The estimated vehicular flow would be 1,800 vehicles per hour (total in both directions) from about 9:30 a.m. to 10:00 p.m. on weekdays, and until 6:00 p.m. on Saturdays. The shopping center traffic peaks would occur between 7:00 and 8:00 p.m. (3,500 vehicles) and between 9:00 and 10:00 p.m. (2,400 vehicles) on weekdays; and between 2:00 and 3:00 p.m. (5,100 vehicles) on Saturday.

b. About 250 trucks would enter the center each day, with no more than 30 trucks present at any given time. This would be about 1.5 percent of the average hourly vehicular flow.

c. The average speed along San Clemente Drive would be 20 m.p.h.

d. The estimated 1985 volume on an exclusive bus right-of-way parallel to San Clemente Drive on the railway right-of-way would be 150 buses during the commuter peak and about 15 buses per hour at all other times. The number of buses would remain constant in the event the busway was constructed on U.S. 101 instead.

e. Express buses would be traveling at 50 m.p.h.; others (15 buses during the commuter peak hour) would be stopping at Corte Madera, so there would be acceleration and deceleration.

f. The shopping center would generate about 3,750 vehicles on the freeway during the commuter peak. Freeway speed can be expected to be 25 m.p.h. in the vicinity of the site during this time.

4.53. Plate 10 shows the predicted L_{10} levels at the proposed site with contributions from U.S. 101, the major arterial and the bus right-of-way. These noise levels are also based on traffic flow patterns during the evening (6 p.m. to 7 p.m.) commuter rush hour. This would be the noisiest period because of the high density of buses on the right-of-way at this time.

4.54. The noise contours in Plate 11 are based on the same traffic flow patterns as in Plate 10 except the shopping center is shown. Comparison of Plates 10 and 11 shows that the noise levels have dropped only 1 dBA with the addition of the shopping center. However, this 1 dBA reduction is only realized when the observer is located somewhere behind the shopping center so that his perpendicular line-of-sight to the freeway is at least partially blocked. Anywhere else in the adjacent area to the east of the center an observer would have enough line-of-sight to U.S. 101 to result in no difference in the L_{10} level with the addition of the shopping center. Plate 10 shows that the existing conditions exceed or equal the design criteria (Table 16) up to 1,450 feet from U.S. 101.

4.55. Plate 11 shows an increase of 8 dBA over current noise levels (Plate 7) at 1,450 feet from U.S. 101. There is no change at 200 feet and 400 feet because U.S. 101 traffic completely dominates with very high noise levels so close to the highway. Plate 12 shows the L_{10} noise level with the mass transit bus route moved to the median of U.S. 101, leaving only local automobile and truck traffic along the major arterial. Previously (Plate 11) mass transit bus noise dominated the area east of the proposed project site. With the new configuration the noise levels are almost entirely due to U.S. 101 traffic except within 200 feet of the major arterial where local truck traffic dominates. Therefore, with the mass transit bus route along U.S. 101, there would be some impact in the first 200 feet of the adjacent area due to truck traffic on the major arterial. East of this point, the noise levels would remain basically unchanged from the existing conditions.

4.56. There will be some increases in noise level due to the increased traffic volume caused by the center. The degree of noise impact results in part from both the degree of noise increase and distance from the source. A traffic increase of 23 percent would result in a noise increase of approximately 1 dBA. An increase of less than 2 dBA is not noticeable. The distance from the center to the west side of the U.S. 101 precludes an impact from the center on this area (Lewitz, 1974).

4.57. Construction of the shopping center and adjacent roadways would take about two-and-a-half years. The noise generated by this construction would have little effect on surrounding areas, since the closest residential section, Marina Village, is some distance from the site. Table 20 shows the expected noise levels generated by various types of equipment during the construction phases. These levels are at 50 feet from the source.

4.58. Impact on Historical and Archaeological Features. While it seems unlikely that archaeological and historical resources are contained within the proposed project site, there is a possibility that such resources might be uncovered during construction. In the event of such an occurrence all construction activities within 30 meters would be halted and a professional archaeologist retained to identify the discovery and evaluate the situation. It would then be his responsibility to recommend any necessary mitigation measures. Correspondence relating to historical and archaeological features of the proposed site can be found in Appendix A.

4.59. Recreation. Approximately 28.5 acres of marshland north of the project site would be reserved for wildlife habitat and open space use to be dedicated by the developer to Corte Madera. The deed for the land would contain a restrictive covenant that the use permitted in the area is to be limited to open space, drainage, and wildlife habitat. Marin Mall's impact on the Town's park and recreation facilities is expected to be negligible. While the demand for additional parks has not been projected, the General Plan cites existing insufficiencies and proposes a series of specific sites for development.

4.60. Schools. The mall could have a slight impact on schools. While the shopping center is expected to add some \$10 or \$12 million of new tax base to the Larkspur School District, State law currently allows increases in school district expenditures only when enrollment rises. Therefore, the tax rate would decline, while the schools would receive no additional funds. The increased tax base could bring about a more rapid amortization of outstanding school district bonds. The districts would have increased bonding capacities, but since existing school facilities currently are under-used and the trend is toward fewer children per household, there will be no need for construction bond issues in the near future.

4.61. Police and Fire Protection. The proposed regional shopping center would likely increase the need for police services. Based upon experiences in similar centers, the arrest rate could increase from the average current rate of 8 per month to perhaps 150 per month. Other policing problems could include thefts from automobiles, hit-run accidents, and stolen automobiles. While the internal security and traffic problems would be the responsibility of a private security force, the Corte Madera Police Department anticipates that should the center be open seven days per week, an additional four sworn officers would be needed.

4.62. Corte Madera's current level of fire protection is now under study to determine present and future needs. It is possible that Marin Mall will require three additional firefighters beyond the number recommended to meet the Town's present needs. Additional laddering demands will be imposed by the shopping center, but they might be fulfilled

through an agreement to provide a ladder truck by automatic response from a neighboring community. If Corte Madera were to purchase a ladder truck, annual costs for the truck, eight firemen and training, equipment, and maintenance are estimated at \$205,050.

Traffic Impacts

4.63. Impact on Vehicular Circulation. Daily vehicle trip rates for major regional shopping centers tend to vary from 36 to 56 trip ends per thousand gross feet of floor area (Appendix G). Therefore, these centers attract between 18 and 28 vehicles per 1,000 square feet of gross floor space on an average day. A weekday rate of 40 vehicle trip ends is widely reported (Appendix F) and has been used for the following analysis. Assuming an average auto occupancy of 1.3 persons per vehicle, this represents 52 person trips per 1,000 square feet of floor area. Subtracting a four percent allowance for transit patronage, the proposed shopping center, with 670,000 gross square feet of floor area, would generate approximately 26,000 vehicle trip ends per average weekday. Based on similar analysis, the center would generate 30,000 vehicle trip ends on a Saturday.

4.64. Plate 16 presents estimated 1985 traffic volumes for the immediate road network for with and without project conditions. Plates 17 and 18 compare peak hour conditions for 1985.

4.65. The motor vehicle traffic increases and redistribution resulting from Marin Mall operation will adversely impact portions of the road network at the site and in adjacent areas. The following discussion keys on the major elements of the road network in the area.

4.66. Impact on Highway 101 Freeway. The following are estimates of how the Marin Mall traffic might affect conditions on U.S. 101:

<u>Highway Segment</u>	<u>Existing Traffic</u>	<u>Existing With Marin Mall</u>	<u>1985 Traffic</u>	<u>1985 With Marin Mall</u>
South of Tamalpais	E*	E	F	F
Tamalpais to Industrial Way	D-E	E	F	F
Industrial Way to Greenbrae	C-D	D	E	E
North of Greenbrae Interchange	D	E	F	F

SOURCE: Marin Mall Environmental Report

* Refer to Section 2.95 for definitions of the letter codes representing the Levels of Freeway Service.

4.67. The above data indicated that under existing conditions the Marin Mall traffic would result in somewhat decreased service, but by 1985 problems on the U.S. 101 freeway would be serious with or without the shopping center.

4.68. Impact on major arterials and connectors. The following analysis is based primarily on "Transportation Elements for the Environmental Impact Report on Marin Mall" prepared by DeLeuw, Cather and Company (Appendix G):

<u>Road Segment</u>	<u>Existing Traffic</u>	<u>Existing With Marin Mall</u>	<u>1985 Traffic</u>	<u>1985 With Marin Mall</u>
Sir Francis Drake Blvd. w/o U.S. 101	E**	F	F	F
Sir Francis Drake Blvd. e/o U.S. 101	D	D	F	F
Bon Air Drive	C	C	D	D
Doherty Drive	C	C	D	D
Lucky Drive	C	C	D	D
Fifer Avenue	C	C	D	D
Nellen Avenue	C	D	C	D-E
Madera Boulevard	C	C	D	D
Tamalpais Drive w/o U.S. 101	C	C	D	D
Tamalpais Drive w/o U.S. 101	D	F	E-F	F
Magnolia Avenue s/o Doherty Drive	D	D	D-E	D-E
San Clemente Drive	C	C	C	C
Paradise Drive South	C	C	C	C
Paradise Drive North	C	C	C	C
Redwood Highway	C	C-D	D	E

**Refer to Section 2.104 for definitions of the letter codes representing the Levels of Service for major arterials and connectors.

4.69. Traffic data reveals that congestion will increase in a number of areas by 1985, with or without Marin Mall. Serious congestion will result on Sir Francis Drake Boulevard, on Tamalpais Drive, on Magnolia Avenue, and on Redwood Highway. If future traffic congestion in the project area could be attributed solely to the increase resulting from Marin Mall, then the problem and possible solutions would not be overly complex. However, Marin Mall will add to an already serious situation, not cause it, and the solutions are not readily apparent. All new developments in the area will cumulatively cause the traffic problems. A solution would be of course, redistribution of future development in a way to minimize congestion. This "solution," however, is not within the scope of the Corps' authority. The Corps has jurisdiction over the Marin Mall development, and although some other projects in the area might fall under Corps jurisdiction, the vast majority of them will not. It appears that the local planning agencies, through recommendations to their respective government bodies, would be the only ones who could effectively control the traffic problems.

4.70. Possible Transportation Improvements.* In developing the site plans for the Marin Mall the applicant and his consultants have suggested a number of road network improvements which could help lessen the project's impact on traffic congestion. The Environmental Impact Report prepared by Livingston and Associates (1977) for the Marin Mall presents two categories of improvements: (1) "Trafficways improvements proposed by the developer as a part of the Marin Mall development", and (2) "Additional trafficways improvements which would be necessary to mitigate the adverse impact of Marin Mall traffic and would maintain at least a minimum acceptable level of service." In reviewing the following suggestions it is important to note that although these improvements have in many cases been discussed with the Town of Corte Madera and with the California Department of Transportation and have in some cases been endorsed or suggested by the Town or the State, there are currently no firm plans* by the appropriate agencies to implement them:

(1) Trafficways improvements proposed by the developer as a part of the Marin Mall development.

a. Improve the U.S. 101-Tamalpais Drive interchange by removing ramp loops from the northeast and southwest quadrants, re-aligning both north and southbound off-ramps to meet signalized intersections with Tamalpais Drive, and widening the overpass approaches.

b. Widen Tamalpais Drive to six lanes between the U.S. 101 freeway and San Clemente Drive.

c. Install a three-phase actuated traffic signal at the San Clemente Drive-Tamalpais Drive intersection.

*In January of 1978 the Town of Corte Madera hired the firm of Alan M. Voorhees and Associates, Inc., to further study the traffic problems related to the Marin Mall project.

(2) Additional trafficways improvements which would be necessary to mitigate the adverse impacts of Marin Mall traffic and would maintain at least a minimum acceptable level of service:

a. Widen Redwood Highway to four lanes south of Industrial Way to accommodate projected peak hour trips.

b. Widen the Paradise Drive North approach to Redwood Highway to two lanes, providing a separate left turn lane.

c. Widen Nellen Avenue to three lanes from Fifer Avenue to the U.S. 101 underpass which should remain two lanes. Between the underpass and Paradise Drive North, Nellen should be one lane westbound and three lanes eastbound, providing two left turn lanes at the intersection.

d. Install a traffic signal at the Nellen Avenue/Paradise Drive/Redwood Highway intersection.

e. Make short-term improvements to the Nellen Avenue/Fifer Avenue/U.S. 101 intersection so that only right turns can be made from southbound Nellen Avenue; and widen the U.S. 101 southbound off-ramp to two lanes as it approaches Nellen Avenue -- one for right turn and through movements and one for left turns.

f. Extend the east-west portion of Nellen Avenue westward along the Northwestern Pacific Railroad right-of-way to Tamal Vista Boulevard, and restrict northbound Nellen Avenue at Fifer Avenue to right turns only onto the freeway southbound. This will improve east-west circulation across the freeway and allow safe 1985 operation of the Nellen/Fifer/U.S. 101 intersection.

g. Construct a new east-west four lane road between Paradise Drive South and San Clemente Drive approximately 800 feet south of Tamalpais Drive to provide adequate access to Paradise Drive South properties.

h. Interconnect the proposed Tamalpais Drive traffic signal at the U.S. 101 southbound off-ramp with the U.S. 101 northbound off-ramp signal so as to provide a green light for most through traffic at the downstream Tamalpais Drive intersection.

i. Construct Tamalpais Drive improvements so that intersection channelization will allow emergency vehicles to mount curbs, and install traffic signal pre-emptive devices to allow emergency vehicles to safely gain priority over other vehicles.

j. Construct one additional approach lane on the U.S. 101 northbound off-ramp to Tamalpais Drive.

k. Construct one additional approach lane on San Clemente Drive northbound to the Tamalpais Drive intersection.

1. Relocate north shopping center entrance driveways so that the westerly entrance is shifted 200 feet to the east and the easterly entrance is shifted 100 feet to the east. The curve in San Clemente Drive at the northwestern corner of the center should be "softened." These changes will discourage non-shopping center traffic from using internal shopping center driveways.

4.71. Lower Ross Valley Transportation Study. In mid-1974 the City of Larkspur and the Town of Corte Madera requested the County of Marin's Transportation Planning staff to conduct an in-depth analysis of the transportation system in the Lower Ross Valley (an area roughly bounded by San Francisco Bay, Paradise Drive, Tamalpais Drive, Magnolia Avenue, College Avenue, and Sir Francis Drake Boulevard) as it is expected to exist in 1985. Both towns were concerned because of the potential cumulative impact on traffic from several projects planned for the area. Six major development proposals were analyzed by the Study:

1. Corte Madera Shopping Center at the subject Marin Mall site.
2. Larkspur Shopping Center at a Bon Air site.
3. San Quentin Peninsula Development.
4. Larkspur Ferry Terminal.
5. Madera del Presidio Residential Development (in Corte Madera).
6. Tiscornia Flatlands Residential Development (in Larkspur).

4.72. Although some "numbers" and plans have changed for the projects analyzed, the general conclusions (it should be noted that the Study is currently undergoing revision) of the Study have some relevance, among them:

1. "The alternative with the Regional Shopping Center located at the Hahn site produced the greatest travel demands on Highway 101 and its interchanges. Locating the center at the Hahn site will, therefore, cause more congestion and delay for the greatest number of Marin residents as Highway 101 serves as the Main Street for all of Marin. As discussed later, a center at the Bon Air site will cause more congestion on local streets than would a center at the Hahn site." The report also states that "All of the systems tested will require major improvements of roadway and/or transit facilities immediately adjacent to each major development if 1975 service levels are to be maintained." In other words, the study appears to conclude that all developments considered would put strain on the road network, but the Hahn site would have the most impact on U.S. 101.

2. "The Lower Ross Valley Study has found that the combination of major developments now proposed for the Corte Madera-Larkspur area, would produce travel demands far exceeding the capacity of local streets

and/or transit systems. To solve the very difficult problems found by the Lower Ross Valley Study, one or a combination of the following actions need to be considered: A scaling down of allowable development; a greater commitment of either public or private funds to transportation systems; and a careful development design review process to incorporate the needed transportation system increases with a minimum of community disruption and an emphasis on non-automotive modes of travel."

4.73. Haul Vehicle Impacts. The developer has accepted bids for fill material from the Hutchinson Company*. The quarry is located just north of the proposed project site on East Sir Francis Drake Boulevard. There are two probable routes from the quarry to the project site, each using U.S. 101. One route involves the Lucky Drive interchange and freeway frontage roads, and the other involves use of the Tamalpais Drive interchange and Tamalpais Drive.

4.74. Assuming the entire haul were made using only tractor, semi-trailer, and full trailer equipment with a capacity of 25 cubic yards per load, the project would require approximately 20,000 loads, for a total of 20,000 round trips. The impact of this importation would vary according to weather conditions, the number of trucks involved, the scheduling of the haul, and the exact route to be traveled.

4.75. It may be anticipated the impacts will include increases in traffic, perhaps resulting in further congestion; increases in noise levels due to added truck traffic and placement and compaction of earth materials; and increases in air pollution due to the truck traffic and to the dust normally associated with such excavation, trucking, and placement operations. The magnitude of these impacts can not be determined precisely.

* It should be noted that the applicant has indicated that the Hutchinson quarry will now likely not be the source of the fill material. A search is now being carried out by the applicant to locate a reasonable alternate source area (Jensen, April 78). Because the impacts would likely be similar, it was decided to circulate this document with the Hutchinson quarry information. However, if the new fill material source area is located a considerable distance further away, it can be expected that the impacts of hauling the material would increase.

5.00 ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT
BE AVOIDED

5.01 Significant adverse environmental impacts which may result from the development include increased traffic and attendant noise and air quality problems; loss of wildlife habitat; loss of approximately 5 acres of seasonal wetland containing salt marsh vegetation; and the loss of the project site for other uses.

5.02 The hydrology of the area would be altered by the project and a new equilibrium condition established between precipitation, runoff, evaporation and groundwater storage. The site would be developed so as to maintain proper flood and drainage conditions.

5.03 The area of the Bay and the adjacent lowland areas would be altered for certain vantage points.

6.00. ALTERNATIVES TO THE PROPOSED ACTION

6.01. The three alternatives available to the Corps on the permit application from Ernest W. Hahn, Inc., are to issue the permit, to issue the permit with conditions which would minimize the adverse impacts, or to deny the permit. The impacts from granting the permit are discussed in other sections of this Environmental Statement.

6.02. When a Corps permit is issued with "conditions", these conditions are quite often the result of comments made on the project by another agency or the general public. The conditions are normally designed to insure that a potential adverse environmental impact is not allowed to occur or is at least minimized.

6.03. If the Corps permit is denied, then the applicant is, of course, free to select an alternate use for the site. If the new project is found to also require a Corps permit, then the applicant must again apply for Corps authorization.

6.04. Alternative Projects. Seven alternative types of development on the site have been considered by the Town and discussed by Livingston and Associates in lieu of the proposed shopping center. A description of these alternatives, and a summary of the impacts associated with each can be found in Appendix E.

COMPARISON OF ALTERNATIVES

	Marin Mall	No. 1: Residential	No. 2: Offices	No. 3: Light Industry	No. 4: Retail/Office	No. 5: Office/Light Industry	No. 6: Developed Open Space	No. 7: No Development/ Protected DS
Acreage	57	50	26	46	43	44	50	86
Peak-hour traffic generated as per- cent of Marin Mall peak-hour generation	--	27%	25%	25%	85%	37%	No data	N/A
Permanent jobs provided on site	1,400	N/A	600	650	1,120	800	No data	N/A
Annual water usage in acre-feet*	75-80	139	36	38	40	30	100	N/A
Sanitary waste per day (100's of gallons)	59	185	37	16	53	34	9	N/A
Annual energy usage (Billion BTU)	77	62	32	152	43	102	1	N/A

* One acre-foot of water is approximately 325,851 gallons.

SOURCE OF DATA: Livingston and Associates, EIR for Marin Mall.

6.05. Alternative 1: Residential (50.27 acres). Eight hundred and seventy multi-family residential units and 1,300 parking spaces would be constructed. The residential development would have a favorable impact on existing Corte Madera and Marin County businesses. Construction employment might amount to 355 full-time equivalent jobs, based on a payroll of \$20.0 million and a buildout period of three years. Annual property tax revenues to the Town of Corte Madera should approach \$160,000. Revenues and costs to the affected school districts and county public agencies are expected to be in balance or lean toward a plus situation. Approximately 25.1 billion BTU of energy would be used for electricity for heating and ventilation annually. Gas consumption could reach 36.5 billion BTU annually. About 185,000 gallons of sanitary waste would be produced each day (about 16 percent of the Sanitation District's current capacity), and 139 acre-feet of water annually would be required. The number of peak hour vehicle trips would be equal to 27 percent of the proposed project. The U.S. 101 or the Redwood Highway improvements would not be necessary. Tamalpais Drive would be widened to four lanes east of the overpass, with signals at Paradise Drive south on San Clemente Drive. For peak inbound trips, the transit demand would be 50 percent greater than that of the proposed project. The impacts with respect to wetlands filled soils, geology, and seismicity of the site would be the same as that of the proposed projects, but the lesser amount of pavement would result in less storm water runoff and pollution potential. Noise impacts would depend on the number of trucks used to haul fill material. Visual impacts would be similar to those of the proposed project except that residential development would probably have more vegetation.

6.06. Alternative 2: Offices (26.5 acres by 1985). This alternative would provide 270,000 square feet of office space, two or more restaurants would have 20,000 square feet, and 1,100 parking spaces. This project would have a positive impact on Corte Madera and countywide retail business by increasing employment. There may be some pressure on the local residential market as new jobs are created in the area. Construction employment could reach 168. Permanent employment is estimated at about 600. Total revenues to Corte Madera should approach \$92,160 per year. Total costs for public services are calculated at \$270,565. Energy for heating and cooling would be 15.5 billion BTU of electricity annually. Natural gas consumption could reach 16.4 billion BTU annually, sanitary wastes are projected to be 37,000 gallons per day (about 3 percent of the Sanitation District's current capacity). The project is expected to require 35.5 acre-feet of water annually (63 percent of the shopping center's needs). This alternative would require about half as much land area as the shopping center and the amount of storm drainage would be proportionately less. Present ponding capacity would be reduced by 15 percent. Peak hour evening traffic would be 25 percent of that produced by the shopping center. Transit service demand during the peak evening period would be one-third that of the shopping center. A four-lane Tamalpais Drive with intersection signals would be

necessary east of the freeway. Most of the wetland and all existing drainage ditches could be preserved. Long-term preservation would depend on the "reserve" area (Appendix E) being dedicated or purchased and protected by fences or berms. The noise impact would be substantially less than that of the shopping center. Visual impact would be substantially less, assuming only half the site is developed.

6.07. Alternative 3: Light Industry (45.5 acres by 1985). This project would provide 650,000 square feet of light industrial development with 1,600 parking spaces. The development would create 330 construction jobs for 2 years, with an estimated payroll of \$12.4 million. Permanent employment is projected at 650 jobs. The impact on the housing market is unpredictable. Sales tax revenues of approximately \$97,500 per year plus other revenue of approximately \$10,000, for a total of \$241,500 per year in increased revenues to Corte Madera could be expected. Annual public service costs are estimated to be \$270,565. Light industrial development on 45.5 acres could consume 152 billion BTU annually, although variations of plus or minus one-third could occur depending on the type of industry occupying the site. Approximately 16,000 gallons of sanitary waste, or about two percent of the Sanitation District's current daily capacity, would be produced by this alternative. Assuming that water will not be used for industrial purposes, the employees would require about 38 acre-feet annually. The impact of this alternative on storm drainage and wildlife habitat would be about the same as that for the residential alternative. Traffic impacts for the industrial alternative would be about the same as for the office alternative. Noise impacts would depend on the amount of fill required for the development and the number of trucks needed for haul. Visual impacts would be similar to those created by Marin Mall insofar as site coverage is concerned, but building heights would be about half those of the proposed department stores.

6.08. Alternative 4: Retail/Office (42.9 acres by 1985). This project would provide: 200,000 square feet of office space, 250,000 square feet of specialty retail stores, 15,000 square feet for a theater, 20,000 square feet for two or more restaurants, and 2,200 square feet of parking spaces. A mixed retail and office complex on the site would create 250 direct construction jobs for 2 years with an estimated payroll of \$10 million. Permanent employment would reach 440 office jobs and 630 retail jobs. The development might draw store tenants away from Corte Madera Center, or lower sales levels there and in other competing shopping centers. The degree of impact would depend on the quality of the new retail space, the types of tenants attracted, and market conditions at the time of development. A positive effect on local retailing would result from noon hour shopping. Annual revenues to Corte Madera would total \$346,700. Annual public service costs are estimated to be \$270,565. Annual consumption for electricity is estimated at 8.7 billion BTU of energy for stores, 8.2 billion BTU for offices, 4.7 billion BTU for the restaurants, and 1.0 billion BTU for

the theater, totalling 22.6 billion BTU. Natural gas consumption could amount annually to 7.7 billion BTU in stores and 12.2 billion BTU in offices. Sanitary wastes are expected to be 53,000 gallons per day, or 10 percent less than the shopping center's production. This combination of uses would require about 40 acre-feet of water supply annually, or about 60 percent of the shopping center need. The impact of this alternative on storm drainage would be the same as that for the residential alternative. Evening peak hour traffic generated by mixed retail and office development would be about 15 percent less than that of the shopping center. The improvements to the freeway interchanges, streets, bicycle and pedestrian circulation, and new transit routes needed to serve the shopping center also would be required by this alternative. Wildlife habitat impacts would roughly equal those of Marin Mall, and noise and visual impacts also would be about the same.

6.09. Alternative 5: Office/Light Industry (43.8 acres by 1985). This alternative would provide 160,000 square feet of office space, 400,000 square feet of light industry, and 1,500 parking spaces. Office, light industry, and warehousing uses are expected to have a favorable impact on local retail trade. On-site employment during construction is estimated at 265 for 2 years, with a \$9.9 million payroll. The industrial and distribution firms are projected to employ 400 and the offices 400 persons. Not all of these jobs would be new in the county, and the impact on housing cannot be predicted. Annual revenues to Corte Madera would total approximately \$178,903. Annual public service costs are estimated to be \$270,565. Office uses are expected to consume electricity in amounts of 4.0 billion BTU of energy annually for heating and 2.4 billion BTU for cooling. Natural gas consumption could reach 9.7 billion BTU per year. Industrial uses might use 86.0 billion BTU of energy annually. Sanitary wastes are forecast at 33,500 gallons per day, or about 2.4 percent of the Sanitation District's capacity. If industrial processing used no water, about 30 acre-feet of water would be required annually. Storm drainage impacts would be the same as for the residential development alternative. Evening peak hour traffic volume would be 37 percent of that projected for Marin Mall. The impact on wildlife habitat would be similar to that caused by the residential alternative. Noise impacts would depend mainly on the amount of fill hauled and the type of construction and the time it took. Visual impact would be about the same as for the industrial alternative.

6.10. Alternative 6: Developed Open Space (50.27 acres). This alternative would provide picnic tables, tennis courts, 150 parking spaces, a playfield, a recreation building, and a swimming pool. A developed open space recreation park alternative could attract visitors to Corte Madera which might benefit local retail stores and restaurants, particularly on weekends. Construction in one year would provide 37 jobs, but the number of permanent operating and maintenance employees

has not been established. Capital costs to improve the site with landscaping, a playfield, picnic tables, tennis courts, a recreation building and swimming pool, and 150 parking spaces are estimated at \$2,000,000. Approximately \$8,340 in property tax revenue currently generated by the site would be lost to Corte Madera, and \$58,728 in property tax revenues would be lost to other jurisdictions within the county because of the removal of the \$2,400,000 parcel from the tax roll. One additional sworn police officer would be required at an annual salary of \$22,320, plus \$500 for equipment. Landscaping and park maintenance are estimated at \$1,500 per acre per year or \$76,500. A recreation center manager, one assistant, and a full-time life guard would require approximately \$30,000 per year in salaries and benefit expenses. Street maintenance is estimated at \$7,500 per year; on-site and off-site street lighting at \$5,000 per year; and recreation center maintenance costs at \$2,500 per year. Energy usage might be 12 million BTU annually for electricity and could reach 1.0 billion BTU for natural gas. Irrigation of the landscaped areas would be the major water use for this alternative, requiring about 100 acre-feet annually. This could be reclaimed sanitary waste water, of which 9,000 gallons per day would be produced on the site. With minor site modifications, open drainage ditches could be utilized, and this alternative would have no storm drainage impact other than a 40 percent reduction in the existing ponding capacity. The amount of traffic generated would be relatively small, especially during the evening peak hour. No improvements to streets would be necessary, except that pedestrian, bicycle, and transit facilities would be needed. Recreation use of the site would not preserve existing natural wildlife habitat. However, playfields and seasonal recreation facilities could be designed so as to withstand occasional flooding, and consequently fill above the present grade could be minimized. Engineered fill would be required under structures and permanent recreation facilities. An important aspect of the developed open space alternative is the potential it would offer for a large regional recreation-open space facility in this portion of Marin County. The northern portion of the site would be retained in natural open space, as would the Heerdt Marsh and major portions of the Muzzi property. If the 60 acres of the Muzzi property now being used as a depository for dredging spoils from the Larkspur Ferry Terminal site were also used for park land, there would be more than 400 acres of contiguous open space to be used as a combination of recreation park, natural habitat, and visual open space.

6.11. Alternative 7: No Development/Protected Open Space. No proposal has yet been developed for the permanent dedication of the project site as open space. The Town of Corte Madera's General Plan does not propose such a use, though this alternative remains open. No jurisdiction has expressed interest in the purchase or administration of the site.

6.12. The project site is next to the Corte Madera Ecological Reserve, and the site could potentially act with others nearby (the northern 28.5 acre proposed wildlife preserve, the northern triangular marsh, the Muzzi property, and ther Heerdt Marsh) to form a single, continous protected open space. Local interest has been demonstrated in the preservation of wetlands, and two experiments have been conducted nearby in the restoration of former wetlands. To the south of the site, a triangular plot (the Marin County Day School Marsh) has been planted with wetland vegetation, and 2 km to the northwest of the site, the County of Marin has established a marsh plant nursery/test area on Corte Madera Creek.

6.13. The San Francisco Bay Conservation and Development Commission (BCDC) showed this expanded area in its 1969 San Francisco Bay Plan as "Corte Madera Shoreline Park (Proposed)." In 1971 the plan was amended to delete this proposal, and now includes a policy note calling for a "60 to 100 acre shoreline park as part of future development."

6.14. The dedication of the area would preserve the current unobstructed view of the bay from the freeway and the nearby hills. It would preserve natural habitat for wildlife as described in the environmental setting.

6.15. It is noted that 17 acres of the site have already been filled; plans for the use of this land might be made separately from unfilled lands. The option of breaching dikes and returning the entire area to tidal marsh has not been considered here probably because of the cost of such a program. However, the neighboring Muzzi property has already been partially returned to tidal flows.

6.16. This alternative would have some economic impact, as unimproved commercial land would be removed from local tax roles. The land is currently valued at \$2,400,000 (\$600,000 assessed value) and generates tax revenues of \$8,340 in its current state. Adjustments would have to be made in these figures for the decreased commercial value of the land.

7.00. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

7.01. Relative to the evolution of the earth as a whole, the use of an area as a shopping center is certainly short-term.

7.02. The gradual destruction of the marshes of San Francisco Bay has resulted in a situation where any areas of that habitat remaining are considered valuable. Man's use of even marginal marshland habitat (essentially seasonal wetland in this case) for commercial development places increased negative pressure on wildlife. Once the area is completely filled and paved, the possibility for restoration is essentially lost and part of the base of our food pyramid is no longer available.

7.03. The loss of biological productivity resulting due to the Marin Mall project itself may not be obvious; however, the loss of this area combined with the losses which have already taken place and possible future ones, will have an adverse impact on long-term productivity.

8.00. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES
WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE
IMPLEMENTED

8.01. Development of a regional center on the project site would result in the destruction of wildlife habitat. Approximately 45 acres consisting of grassland and some salt marsh would be irreversibly committed to fill. The wildlife of these areas, including meadow mice, waterfowl, hawks, doves, owls, perching birds, black-tailed jackrabbits, ground squirrels, herons, coots, king-fishers, and gopher snakes would be displaced. Twelve acres of already filled land colonized by grasses and forbs and inhabited by black-tailed jackrabbits and doves will also be lost to the development of the project.

8.02. Some irretrievable resource commitment would be involved in supplying power for the facility, water, etc. The land would be unavailable for water-related development.

9.00. COORDINATION AND COMMENTS AND RESPONSES

9.01. Public Participation. The application for a Department of the Army permit by Ernest W. Hahn, Inc. was first announced by the Corps in Public Notice No. 73-24, 15 September 1972. The proposal was later revised in order to mitigate the impact of the project on wildlife habitat, and this revision was announced in Public Notice No. 73-24(a), 13 April 1973. In accordance with Department of the Army regulations, comments were solicited in both public notices from the general public and from specific Federal and State agencies. A public meeting was held in reference to Public Notice No. 73-24(a) on 5 June 1973 and continued on 12 June 1973; this meeting was announced in Public Notice 73-92, 4 May 1973. A draft environmental statement was prepared for the Hahn project in January of 1974 (discussion of this document follows below).

9.02. Based upon regulations in force in April 1975, the Corps determined that the subject Marin Mall Regional Shopping Center site (commonly referred to as the Hahn Shopping Center site at that time) was not within its regulatory jurisdiction. The applicant and the Town of Corte Madera were informed of this finding by letters dated 7 May 1975. On 27 March 1975, the District Court of the District of Columbia ordered the Corps of Engineers to extend its jurisdiction under Section 404 of the Federal Water Pollution Control Act Amendments (FWPCA) of 1972 to all waters of the United States. The Corps, based on revised regulations, reexamined all factors involved in its jurisdiction decision over the Hahn site. The site was found to constitute a coastal wetland adjacent to coastal waters, as described in Corps regulations, and a Department of the Army permit under Section 404 of the FWPCA was found to be required.

9.03. Following the Corps' reexamination of its jurisdiction over the site, the United States District Court for the Northern District of California issued a decision on Corps jurisdiction behind dikes in the San Francisco Bay area under the Rivers and Harbors Act of 1899. On 11 March 1976, that Court ruled that diked areas "... which lie within the former line of mean higher high water (MHHW) in its unobstructed, natural state..." are still within jurisdiction of that Act. This situation was found to exist at the Hahn site. San Francisco District Public Notice No. 11101-47, dated 21 June 1976 (Document A-23, Appendix A), announced the jurisdictional information summarized above.

9.04. San Francisco District Public Notice No. 11101-47 (revision of 21 June 1977 Public Notice), dated 9 November 1976, announced the current application which is the subject of this final environmental statement. A San Francisco District Public Notice dated 9 May 1977, announced a Public Hearing held by the Corps on 27 June 1977, in the Town of Corte Madera. Speakers at the hearing included the Corte Madera Planning Director, representatives of the Marin Audubon Society and the Sierra Club, Ernest W. Hahn, and 17 other individuals. The primary areas of concern brought out at the hearing were traffic congestion, economic

justification, seismic safety, scale of the project, and possible loss of marshland. A Proposed Final Environmental Statement (discussion below) was released simultaneously with the 9 May Public Notice.

9.05. Government Agencies. Comments on Public Notice 73-24(a), 13 April 1973, were required from the U.S. Department of the Interior, U.S. Department of Commerce, the U.S. Environmental Protection Agency, and the California State Resources Agency. Briefly, the Department of Commerce, National Oceanic and Atmospheric Administration, had no objections to the issuance of the fill permit; and the Department of the Interior and the Fish and Wildlife Service did not oppose the issuance of the permit if the applicant agreed to certain mitigative conditions as outlined in paragraph 1.38. The California State Resources Agency had no objection to issuance of the fill permit provided certain requirements were met as outlined in paragraph 1.40. The U.S. Environmental Protection Agency did not comment on the Public Notice pending preparation of an Environmental Statement.

9.06. Comments concerning the Draft Environmental Statement (released in January of 1974) were received from the following agencies:

- U.S. Environmental Protection Agency
- U.S. Department of the Interior
- U.S. Department of Health, Education and Welfare
- Federal Highway Administration
- Advisory Council on Historic Preservation
- Council on Environmental Quality
- The Resources Agency of California
- Marin Municipal Water District
- Town of Corte Madera

9.07. Briefly, comments concerning the Draft Environmental Statement (DES) were concerned with air quality, solid waste, noise, fish and wildlife resources, archaeological resources, traffic, and water supply. The letters of comment concerning the DES are included as Appendix D of this document. The responses to these comments, as they appeared in the Proposed Final Environmental Statement (May 1977), are also included in Appendix D. It should be noted that these responses and comments concerned the earlier Hahn proposal, and that in some cases they may no longer be entirely relevant (also, paragraph references are for the Proposed FES, not this FES). The Proposed Final ES, the discussion of which follows shortly, served to present the revised project and to allow for amended comments by earlier commentators or additional comments from others.

9.08. Letters of comment concerning Public Notice No. 11101-47 (9 November 1976) were received from the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service (Department of the Interior), the National Oceanic and Atmospheric Administration (Department of Commerce), and the Resources Agency of California. The Environmental

Protection Agency indicated that they were holding their comments for the "pre-final EIS." The Fish and Wildlife Service indicated that they would not oppose issuance of the permit if certain conditions were met. These conditions essentially were the relocation of a roadway adjacent to the mitigation area, installation of a water treatment facility, and the development and implementation of a habitat management program. The National Oceanic and Atmospheric Administration indicated that they had no objection to issuance of the permit. The State Resources Agency indicated that they would not object to issuance of the permit if the Department of Fish and Game's requirements for a conservation easement are satisfied.

9.09. Comments concerning the Proposed Final Environmental Statement (May 1977) were received from the following agencies:

U.S. Environmental Protection Agency
Federal Highway Administration
California State Department of Transportation
California State Reclamation Board
California State Department of Health
Marin Municipal Water District
Town of Corte Madera
City of San Rafael

9.10. Proposed FES comments were primarily concerned with traffic congestion, seismic hazards, air quality, loss of marshland, and economic justification. Letters of comment received concerned the Proposed FES are included as Appendix F of this document. Responses to the comments made in these letters are also included in Appendix F.

9.11. Citizen Groups. The primary interests expressed in non-agency comments received on Public Notice No. 73-24(a), 13 April 1973, were related to favorable economic benefits to the community, employment opportunity, traffic, filling of marshland, loss of wildlife habitat, drainage and flood control. effect on existing centers, air pollution, use of the railroad right-of-way, and water and sewage services.

9.12. Non-agency comments concerning the Draft Environmental Statement were received from the Marin Conservation League and seven private citizens. Comments were also received from the counsel for Ernest W. Hahn, Inc., and from Ernest W. Hahn. The letters of comment received on the Draft ES are included in Appendix D, as are the responses.

9.13. Non-agency letters of comment concerning Public Notice No. 11101-47 (9 November 1976, announcing the current application) discussed, among other topics, loss of marshland, air pollution, traffic congestion, and economic justification.

9.14. Non-agency comments concerning the Proposed FED were received from the Sierra Club, the Marin Audubon Society, 30 individuals, and from Livingston and Associates. As with comments received during previous phases of the permit review process, comments covered a larger number of topics. However, the areas which seemed to be of primary concern were traffic congestion, air quality, damage to marshland, seismic hazards, and economic justification. Letters of comment received concerning the Proposed FES, and responses, are included in Appendix F as explained in paragraph 9.10.

9.15. Local Authorization. The subject activity required authorization by the Town of Corte Madera. Through January of 1978, the Town of Corte Madera has not taken final action concerning the project. "Where the required Federal, State, and/or local certification and/or authorization has been denied, the application for a Department of the Army permit will be denied without prejudice to the right of the applicant to reinstate processing of his application if subsequent approval is received... [33CFR320.4(j)(i)(1977)]."

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TABLES

PLEASE NOTE: THE TABLES ARE ESSENTIALLY THOSE PRESENTED IN THE PROPOSED FINAL ENVIRONMENTAL STATEMENT. NEW MATERIAL HAS BEEN ADDED AS REQUIRED. THE TEXT OF THIS FINAL ENVIRONMENTAL STATEMENT REPRESENTS A SUBSTANTIAL REVISION OF THAT EARLIER DOCUMENT. BECAUSE OF THIS IT IS SUGGESTED THAT MATERIAL IN THESE TABLES NOT BE USED WITHOUT ALSO REFERRING TO THE TEXT. OLDER TABLES HAVE BEEN LEFT IN THIS DOCUMENT FOR COMPARISON AND REFERENCE PURPOSES.

TABLE 2
PROJECT COSTS AND BENEFITS (1972)
(In thousands of dollars)

	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	Annually Through 1999-2000	Total Thru FY 1999-2000
<u>Town of Corte Madera</u>									
Property Tax	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ 153	\$ 153	\$ 2,907
Sales Tax	-0-	419	565	692	712	712	712	712	17,339
Less: Municipal Expense	(181)	(163)	(184)	(206)	(206)	(206)	(206)	(206)	(5,266)
Total Benefits (Costs)	\$ (181)	\$ 256	\$ 381	\$ 486	\$ 506	\$ 506	\$ 659	\$ 659	\$14,980
<u>School Districts</u>									
Property Tax Revenue	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ 813	\$15,447
Less: School Expenses	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Total Benefits (Costs)	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ 813	\$15,447
<u>County (Including Special Tax Districts)</u>									
Property Tax Revenue	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ 363	\$ 6,897
Sales Tax	-0-	105	141	173	178	178	178	178	4,335
	\$ -0-	\$ 105	\$ 141	\$ 173	\$ 178	\$ 178	\$ 178	\$ 541	\$11,232
								TOTAL	\$41,659

Source: Sedway/Cooke (1973)

TABLE 1
ESTIMATED BOND SERVICE REQUIRED
\$6.8 MILLION (\$5.0 MILLION NET)
(In thousands of dollars)

Year Ending June 30	Spec. Fund Bal. Beg. of Year	Tax Revenues	Bonds Out- standing Beg. of Yr.	Interest Payable* @ 6.1/2%	Principal Retired	Premium Paid
-----Alternative I (Regional Center Only)-----						
1974	\$1,800	\$ 43	\$6,800	\$442	\$ -0-	\$ -0-
1975	1,401	192	6,800	442	-0-	-0-
1976	1,151	1,330	6,800	442	-0-	-0-
1977	2,039	1,330	6,800	442	3,000	90
1978	2,927	1,330	6,800	442	1,000	25
1979	725	1,330	3,800	247	1,000	20
1980	783	1,330	2,800	182	1,000	\$ 27
1981	\$ 911	\$1,330	\$1,800	\$117	\$1,800	
Balance of \$297,000 as of June 30, 1981						

* Approximately four years interest funded from bond proceeds

Source: Sedway/Cooke (1973)

TABLE 4
AGE COMPOSITION FOR CORTE MADERA AND MARIN COUNTY (1970)

Age	CORTE MADERA		MARIN COUNTY	
	Persons	%	Persons	%
Below 5	722	8.0%	15,497	7.5%
5 - 14	1,749	19.3%	39,632	19.2%
15 - 24	1,200	13.2%	31,864	15.5%
25 - 34	1,304	14.3%	31,792	15.4%
35 - 44	1,378	15.2%	28,757	14.0%
45 - 54	1,270	14.0%	26,326	12.8%
55 - 64	823	9.0%	16,986	8.2%
65 and Above	636	7.0%	15,184	7.4%
Total Population	9,082		206,038	

Source: Sedway/Cooke (1973)

TABLE 3
POPULATION FOR CORTE MADERA AND MARIN COUNTY (1970)

Age	CORTE MADERA				MARIN COUNTY			
	West of Freeway		East of Freeway		Total		Persons	Percent
	Persons	Percent	Persons	Percent	Persons	Percent		
Below 5	527		195		722	8.0	15,497	7.5
5 - 14	1,173		576		1,749	19.3	39,632	19.2
15 - 24	899		301		1,200	13.2	31,864	15.5
25 - 34	934		370		1,304	14.3	31,792	15.4
35 - 44	973		405		1,378	15.2	28,757	14.0
45 - 54	936		334		1,270	14.0	26,326	12.8
55 - 64	643		180		823	9.0	16,986	8.2
65 and above	516		120		636	7.0	15,184	7.4
TOTAL	6,601	72.7	2,481	27.3	9,082		206,038	

Source: Town of Corte Madera (1973)

TABLE 6
INCOME CHARACTERISTICS OF FAMILY HOUSEHOLDS
FOR CORTE MADERA, MARIN COUNTY AND SAN FRANCISCO-OAKLAND SMSA (1969)

Income Range	CORTE MADERA			MARIN COUNTY	SAN FRANCISCO-OAKLAND SMSA*
	West Number of Households	East Number of Households	Total Percent	Percent	Percent
below \$4,000	105	36	5.6	6.9	10.3
\$ 4,000 - \$ 6,999	165	23	8.5	9.0	11.6
\$ 7,000 - \$ 9,999	224	64	11.5	12.9	16.5
\$10,000 - \$14,999	516	183	27.9	27.1	29.4
\$15,000 - \$24,999	676	251	36.9	30.4	24.5
\$25,000 - \$49,999	138	84	8.8	11.7	6.5
above \$50,000	10	11	0.8	2.0	1.2
Median Income	\$14,031	\$15,797	\$14,100	\$13,935	\$11,802

* Includes Marin, Alameda, San Francisco, San Mateo and Contra Costa Counties

Source: Town of Corte Madera (1973)

TABLE 5
POPULATION PROJECTION
MARIN COUNTY

	Historic Growth 1950-1972			
	1950	1960	1970	1972
Nine County Bay Area	2,681,322	3,638,939	4,628,199	4,761,100
Marin County	85,619	146,820	206,038	208,500
% Marin County of 9 County Bay Area	3.2%	4.0%	4.4%	4.4%
9 County Average Annual Growth Rate		3.6%	2.7%	1.4%
Marin County Average Annual Growth Rate		7.1%	4.0%	0.6%
	Projections 1975-1985			
	1975	1980	1985	
Nine County Bay Area	5,100,000	5,600,000	6,075,000	
Marin County	230,000	260,000	290,000	
% Marin County of 9 County Bay Area	4.5%	4.6%	4.8%	
9 County Average Annual Growth Rate	2.4%	2.0%	1.7%	
Marin County Average Annual Growth Rate	3.4%	2.6%	2.3%	

Source: Sedway/Cooke (1973)

TABLE 7

ESTIMATED PER CAPITA INCOMES AND DSTM EXPENDITURES
SELECTED AREAS
(1972 DOLLARS)

-----Incomes-----	
	Est. 1972
Nine County Bay Area	\$ 3,966
Marin County	4,813
% Nine County Bay Area	1.21%
Five Mile Area	\$ 5,300
% Marin County	1.10%
% Nine County Bay Area	1.34%
% Marin County excluding Five Mile Area	1.32%
-----DSTM Expenditures-----	
Per Capita Income	\$ 4,150
Per Capita DSTM Potential	\$630
Dept./Discount Stores	
Other DSTM Type Stores	
	Est. 1972
	Marin County
	Bay Area
	Est. 1972
	Marin County
	Est. 1972

Source: Sedway/Cooke (1973)

TABLE 8

EMPLOYMENT CHARACTERISTICS OF MARIN COUNTY
AND SAN FRANCISCO-OAKLAND SMSA*

		Total Civilian Employment	Population	Jobs Per 1,000 People
San Francisco-Oakland SMSA:				
Year				
1960		1,071,600	2,665,600	40.2
1965		1,224,700	2,962,600	41.3
1970		1,396,900	3,112,700	44.9
1971		1,372,500	3,122,300	44.0
% Annual Change				
1960 - 1965		2.9	2.2	-
1965 - 1970		2.8	1.0	-
1970 - 1971		1.7	0.3	-
1960 - 1971		2.6	1.6	-
Marin County:				
Year				
1960		32,900	148,800	22.1
1965		44,000	185,700	23.7
1970		54,700	207,500	26.4
1971		54,800	208,400	26.3
% Annual Change				
1960 - 1965		6.7	5.0	-
1965 - 1970		4.9	2.3	-
1970 - 1971		0.2	0.4	-
1960 - 1971		6.1	3.6	-

* Consists of Alameda, Contra Costa, Marin, San Francisco and San Mateo Counties.

Source: Sedway/Cooke (1973)

TABLE 9

OCCUPATIONS OF CORTE MADERA CIVILIAN LABOR FORCE (1970)

Industry	Persons	Percent
Construction	211	5.2
Manufacturing	378	9.4
Transportation and Communication	348	8.6
Wholesale and Retail	886	22.0
Finance, Insurance and Real Estate	425	10.5
Business and Repair Service	228	5.7
Personal Services	127	3.1
Health and Education Services	516	12.8
Other Professional and Related Services	322	8.0
Public Administration	270	6.7
Other Industries	88	2.2
Unemployed	232	5.8
Total Civilian Labor Force	4,031	100.0

Source: Town of Corte Madera (1973)

* * * * *

TABLE 10

PLACE OF WORK FOR CORTE MADERA AND MARIN COUNTY RESIDENTS (1970)

Destination	CORTE MADERA		MARIN COUNTY	
	Persons	Percent	Persons	Percent
San Francisco County	1,886	789*	29,662	13,071*
Marin County	1,360	35.8	40,175	48.7
Alameda County	128	3.4	2,005	2.4
San Mateo County	82	2.2	1,988	2.4
Contra Costa County	12	0.3	868	1.1
Other**	331	8.7	7,725	9.4
Total	3,799	100.0	82,423	100.0

* San Francisco Central Business District

**Includes Sonoma County and other areas outside of the San Francisco-Oakland SMSA, as well as those not reported in the census count sample.

Source: Town of Corte Madera (1973)

TABLE 11

WARRANTED DSTW AREA

MARIN COUNTY

(sales given in thousands of dollars)

	1975	1980	1985
Total DSTW potential	\$ 177,100	\$ 213,200	\$ 252,300
Less export at 10%	17,700	21,300	25,200
Marin County share	\$ 159,400	\$ 191,900	\$ 227,100
-----Department Store Warranted Area-----			
Department Store Share @ 50%	\$ 79,700	\$ 95,950	\$ 113,550
Less est. 1972 sales*	50,000	50,000	50,000
Total new department store sales	\$ 29,700	\$ 45,950	\$ 63,550
Warranted Area @ \$70 per sq. ft.	424,000	656,000	907,000

-----Other DSTW Warranted Area-----

Other DSTW Store Share @ 50%	\$ 79,700	\$ 95,950	\$ 113,550
Less est. 1972 sales	70,000	70,000	70,000
Total new other DSTW store sales	\$ 9,700	\$ 25,950	\$ 43,550
Warranted Area @ \$60 per sq. ft.	161,000	432,000	726,000

-----Total Warranted Area-----

Total Area Sq. Ft.	585,000	1,088,000	1,633,000
--------------------	---------	-----------	-----------

* Estimated sales assuming Sears opened full year. Average sales per square foot for all department and discount stores operating amounts to \$77 per square foot, 24% greater than "normal sales productivity" average for existing facilities.

Source: Sedway/Cooke (1973)

AD-A064 160

CORPS OF ENGINEERS SAN FRANCISCO CALIF SAN FRANCISCO--ETC F/G 5/1
FINAL ENVIRONMENTAL STATEMENT, HAHN SHOPPING CENTER (MARIN MALL--ETC(U)
AUG 78

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TABLE 12

EFFECTIVE CAPACITY

MAJOR DEPARTMENT AND DISCOUNT STORES

MARIN COUNTY

Department Stores	Location	Size (sq. ft.)	Normal Sales Level (\$/sq. ft.)	% Sales From Within Marin County	Effective Competition (thousands of dollars)
Macy's	San Rafael CBD	55,000	\$ 50	100%	\$ 2,750
Penney's	San Rafael CBD	25,000	50	100	1,250
Penney's	Corte Madera	30,000	60	100	1,800
Montgomery Ward	Corte Madera	65,000	60	100	3,900
Sears	Northgate	200,000	70	90	12,600*
Emporium	Northgate	210,000	70	90	13,230
Total		585,000			\$35,530
Discount Stores					
Disco	San Rafael	30,000	\$ 70	100	\$ 2,100
Disco	Larkspur	35,000	70	100	2,450
Total		65,000			\$ 4,550
Total (incl. Sears)		650,000	\$ 62		\$39,900
Total (excl. Sears)		450,000	\$ 61		\$27,300
Estimated 1971 Department and Discount Store Sales from Marin County residents					
			\$37,000,000		
Estimated 1971 Department and Discount Store Sales per square foot					
			\$82		

* Sears Northgate Store opened in late 1972

Source: Sedway/Cooke (1973)

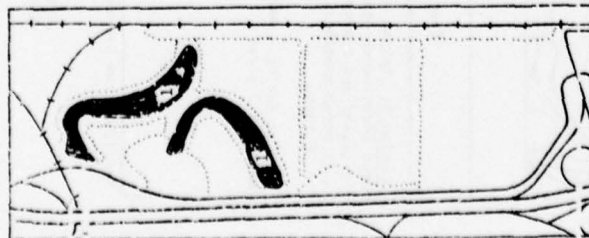
TABLE 13

SUMMATION OF BORING DATA

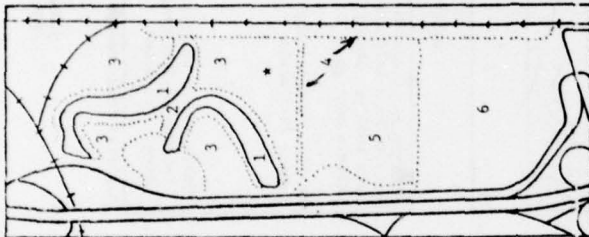
The site was explored by drilling 26 borings to depths ranging from 29 to 105 feet below the existing grade. Boring 4a was drilled 12 feet from Boring 4 to provide supplementary information on the depth to siltstone. The borings were drilled using 4- and 5-inch-diameter rotary wash-type drilling equipment with drilling mud to prevent caving. A summation of the boring data is presented below:

Boring Number	Surface Elevation (feet)	Total Depth (feet)	Soft Mud Thickness (feet)	Depth to Siltstone (feet)	Depth of Fill (feet)
1	-0.7	90	37	75	-
2	-0.3	45	23	28 1/2	-
3	-0.4	80	22	63	-
4	-1.2	101	20	101	-
4a	-1.2	105	20	92	-
5	3.9	101	36	98	6 1/2
6	3.5	80	59	62	6
7	0.2	40 1/2	20	32	-
8	-0.8	29	18	18	-
9	-0.4	51 1/2	16 1/2	42	-
10	-0.3	39	17 1/2	28	-
11	-0.7	55	22	43	-
12	-0.9	60 1/2	18	50 1/2	-
13	-0.8	86	26	75 1/2	-
14	-1.0	75	18	66	-
15	0.0	80	20 1/2	70	-
16	-0.3	89	27 1/2	78	-
17	-1.0	81	32 1/2	71 1/2	-
18	-0.8	105	20 1/2	94 1/2	-
19	-0.7	111	32	103 1/2	-
20	-0.9	66	28 1/2	57	-
21	-0.9	90	29	78	-
22	4.6	102	36 1/2	92	8 1/2
23	4.7	80	39	70 1/2	8 1/2
24	3.2	71	37 1/2	65	5 1/2
25	4.2	65	58	59 1/2	7
26	3.5	70	67	67	6

Source: Le Roy Crandall and Associates (1972)



Wildlife	Habitat Uses
<p>Aquatic life</p> <p>Many Waterboatmen - algae eaters</p> <p>Daphnia</p> <p>Predaceous diving beetles</p> <p>Insect larvae</p> <p>Stickleback fish</p> <p>Amphipods</p> <p>Copepods</p> <p>Nematodes</p> <p>Cladocera</p> <p>Users</p> <p>Northern Phalarope</p> <p>Great Blue Heron</p> <p>Common Egret</p> <p>Snowy Egret</p> <p>Bufflehead</p> <p>Pintail</p> <p>American Coot</p> <p>Ruddy Duck</p> <p>Widgeon</p> <p>Pied-billed Grebe</p> <p>Yellowlegs</p> <p>Dowitchers</p> <p>Avocets</p>	<p>All or part of life cycle spent in ponds. Source of food for users.</p> <p>Feeding in fall</p> <p>Feeding all year</p> <p>Feeding all year</p> <p>Feeding all year</p> <p>Feeding and resting</p> <p>Feeding and resting</p> <p>Feeding and resting</p> <p>Feeding and resting</p> <p>Feeding and resting</p> <p>Feeding and resting</p> <p>Feeding</p> <p>Feeding</p>



Wildlife	Habitat Uses
<p>The wildlife listed for each section represents only those most frequently observed. A complete list of wildlife sighted within the area is found in Table 15.</p>	

Description
<p>Section 1: Formed from diked salt marsh meanders. Brackish water with highly variable salinity due to flooding, leaching and evaporation. Salinity on 1/8/73 was 0.4%. No invertebrates found in mud cover. Aquatic species limited in diversity, high in individuals.</p> <p>Habitat Rating - medium high</p> <p>Area - 6.5 acres</p>

Plants
<p>Algae</p> <p>Mougeotia</p> <p>Spirogyra</p> <p>Navicula</p> <p>Fragillaria</p> <p>Pennularia</p> <p>Nitzschia</p>

Description
<p>Sections were delineated because of differences in vegetation or configuration. Each section has been rated as to its present value as a wildlife habitat in relation to the other portions of the area. Ratings are based on a relative scale of: low; medium; medium high; high; very high.</p>

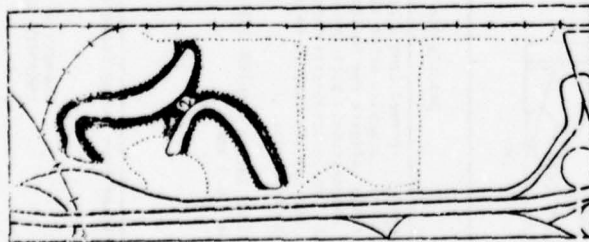
Plants
<p>A complete plant species list is found in Table 15.</p>

Modified from Sedway/Cooke 1973.

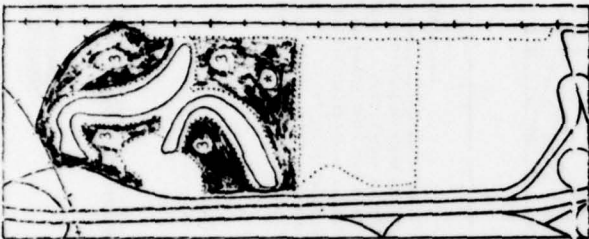
Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER

Modified from Sedway/Cooke 1973.

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER



Wildlife	Habitat Uses
Meadow Mouse White-tailed Kite Sparrow Hawk Burrowing Owl Marsh Hawk	Resident - nesting, feeding Feeding Feeding Feeding Feeding



Wildlife	Habitat Uses
Gopher Snake Meadow Mouse Common Egret White-tailed Kite Sparrow Hawk Burrowing Owl Short-eared Owl Marsh Hawk Western Meadowlark Water Pipit House Finch Loggerhead Shrike Savannah Sparrow Song Sparrow Black-tailed Jack Rabbit	Resident Resident - nesting, feeding Feeding Feeding Feeding Feeding Feeding Feeding Nesting and feeding Feeding Feeding Feeding Nesting and feeding Nesting and feeding Nesting and feeding Resident - nesting, feeding

Description
Section 2: Raised edges of ponds. Differ from surrounding grassland in that elevation is higher and vegetation typical of edges of salt marsh meanders. Vary in width from 25 to 50 feet. Habitat Rating - medium high Area - 6.2 acres

Plants
Total plant cover: 100% Salt Grass Alkali Heath Pickleweed (near water edge)

Description
Section 3: Grassland surrounding ponds. Used to be a salt marsh before diked off in late 1800's. Some fill already present on western edge. Habitat Rating - high Area - 24.3 acres *Small marshy depression Habitat Rating - high Area - 0.5 acres

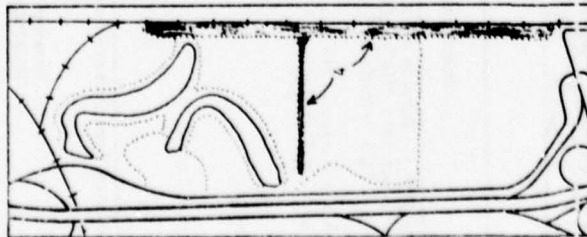
Plants
Total plant cover: 100% Curly Dock Prickly Lettuce Thistle Coyote Bush Sheep Sorrel Annual Grasses Salt Grass Salt Marsh Bulrush Filamentous Green Algae

Modified from Sedway/Cooke 1973.

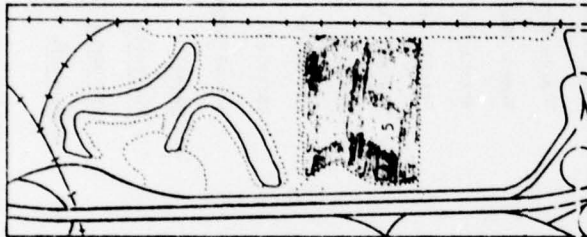
Modified from Sedway/Cooke 1973.

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER



Wildlife	Habitat Uses
Meadow Mouse Ground Squirrel Great Blue Heron Burrowing Owl Common Egret Snowy Egret Kingfisher Mallard Pintail Ruddy Duck Bufflehead Common Goldeneye American Widgeon Greater Scaup American Coot	Nesting, feeding resident Nesting, feeding resident Nesting, feeding resident Nesting, feeding resident Feeding Feeding Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting Feeding and resting



Wildlife	Habitat Uses
Meadow Mouse Short-eared Owl Burrowing Owl White-tailed Kite Red-tailed Hawk Sparrow Hawk Marsh Hawk Mourning Dove Loggerhead Shrike Western Meadowlark House Finch Pine Siskin American Goldfinch Savannah Sparrow Song Sparrow Cinnamon Teal	Nesting, feeding resident Feeding Feeding Feeding Feeding Feeding Feeding Feeding Feeding, feeding Feeding Feeding Feeding Feeding Feeding, feeding Feeding, feeding Feeding

Description
Section 4: Channels and banks separating Section 3 from 5 in an east-west direction and bordering the railroad track from the south to the pumps and tide gates at the northern end. Serve as drainage channels for Section 1. Large stands of Salt Marsh Bulrush at the southern end. Habitat Rating - medium high Area - 4.5 acres

Plants
Total plant cover: 90% Pickleweed Salt Grass Salt Marsh Bulrush Brass Buttons Algae (see Section 1)

Description
Section 5: Grassland resulting from salt marsh diked off in late 1800's. Some vestiges of salt marsh. Habitat Rating - high Area - 19.5 acres

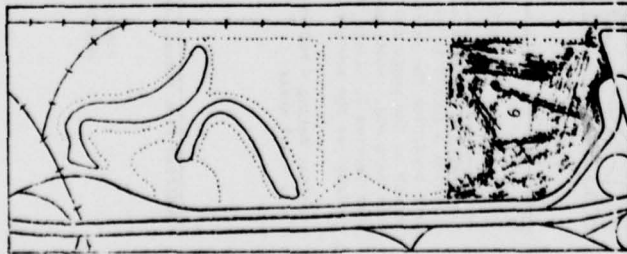
Plants
Total plant cover: 100% Salt Grass Pickleweed Curly Dock Thistle Prickly Lettuce French Broom Wild Anise Annual Grasses

Modified from Sedway/Cooke 1973.

Modified from Sedway/Cooke 1973.

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER



Wildlife	Habitat Uses
Mourning Doves Black-tailed Jack Rabbit	Feeding and resting Grazing

Description
Section 6: Portion of old salt marsh, diked off since late 1800's; filled starting in 1968. Fill colonized by weed species. Habitat Rating - low Area - 22.1 acres

Plants
Total plant cover: 80% Bur Clover Bristly Ox Tongue Prickly Lettuce Willow Herb Lupine Mustard Plantain

Modified from Sedway/Cooke 1973.

Table 14
Summary of Wildlife Habitat and Usage
PROPOSED SITE - HAHN SHOPPING CENTER

TABLE 15
PLANT AND ANIMAL SPECIES IN AND ADJACENT TO THE PROJECT SITE

A. Plant Species on Project Site

I. Salt Marsh Plants

Pickleweed
Salt Grass
Salt Marsh Bulrush
Brass-Buttons
Salticornia virginica
Distichlis spicata
(var. stolonifera)
Scirpus robustus
Cotula coronopifolia

II. Upland Plants

Curly Dock
Wild Anise (Sweet Fennel)
Willow Herb
Summer Mustard
Bristly Ox Tongue
Prickly Lettuce
English Plantain
Lupine
Bur-Clover
Thistle
Annual Grasses
Rumex crispus
Foeniculum vulgare
Epilobium (sp.)
Brassica geniculata
Picris echinoides
Lactuca Serriola
Plantago lanceolata
Lupinus (sp.)
Medicago hispida
Cirsium edule

III. Algae

Mougeotia
Spirogyra
Navicula
Fragillaria
Pinnularia
Nitzschia

TABLE 15 (Cont'd)

B. Birds Sighted on Project Site from 1967 to 1973

<u>Common Name</u>	<u>Scientific Name</u>
Great Blue Heron	<u>Ardea herodias</u>
Common Egret	<u>Casmerodias alba</u>
Snowy Egret	<u>Leucophox thula</u>
Mallard	<u>Anas platyrhynchos</u>
Pintail	<u>Anas acuta</u>
Cinnamon Teal	<u>Anas cyanoptera</u>
American Widgeon	<u>Mareca americana</u>
Greater Scaup	<u>Aythya marila</u>
Common Goldeneye	<u>Bucephala clangula</u>
Bufflehead	<u>Bucephala albeola</u>
Ruddy Duck	<u>Oxyura jamaicensis</u>
White-tailed Kite	<u>Elanus leucurus</u>
Red-tailed Hawk	<u>Buteo jamaicensis</u>
Marsh Hawk	<u>Circus cyaneus</u>
Sparrow Hawk (Kestrel)	<u>Falco sparverius</u>
American Coot	<u>Fulica americana</u>
Mourning Dove	<u>Zenaidura macroura</u>
Burrowing Owl	<u>Speotyto cunicularia</u>
Short-eared Owl	<u>Asio flammeus</u>
Belted Kingfisher	<u>Megasceryle alcyon</u>
Loggerhead Shrike	<u>Lanius ludovicianus</u>

TABLE 15 (Cont'd)

<u>Common Name</u>	<u>Scientific Name</u>
Western Meadow Lark	<u>Sturnella neglecta</u>
House Finch	<u>Carpodacus mexicanus</u>
Pine Siskin	<u>Spinus pinus</u>
American Goldfinch	<u>Spinus tristis</u>
Savannah Sparrow	<u>Passerculus sandwichensis</u>
Song Sparrow	<u>Melospiza melodia</u>
C. Mammals Sighted on Project Site from 1967 to 1973	
Meadow Mouse (California Vole)	<u>Microtus californicus</u>
Ground Squirrel	<u>Citellus beecheyi</u>
Black Tailed Jack Rabbit	<u>Lepus californicus</u>
D. Endangered Species Inhabiting Areas Adjacent to Project Site	
California Clapper Rail	<u>Rallus longirostris obsoletus</u>
Salt Marsh Harvest Mouse	<u>Reithrodontomys paviventris</u>

Source: Modified from Sedway/Cooke (5 February 1973)

TABLE 16

DOT DESIGN NOISE LEVEL/LAND-USE RELATIONSHIPS

LAND-USE CATEGORY	DESIGN NOISE LEVEL - L_{10}	DESCRIPTION OF LAND-USE CATEGORY	Position 1				Position 2			
			L ₁₀	L ₅₀	L ₉₀	Time of Day	L ₁₀	L ₅₀	L ₉₀	L ₉₀
A	60 dBA	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.				1 a.m.				
						2	57	53	48	51
						3	55	51	46	47
						4	55	50	43	44
						5	55	48	41	43
						6	58	52	46	47
						7	60	55	50	50
						8	62	58	55	52
						9	64	61	56	52
						10	64	61	55	51
						11 noon	57	53	50	47
B	70 dBA	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.					58	53	50	46
						1 p.m.				
						2	59	55	51	50
						3	59	55	51	48
						4	60	57	55	47
						5	60	58	56	50
						6	61	58	56	47
						7	63	58	58	53
						8	63	58	56	54
						9	60	58	55	51
						10	60	57	52	48
C	75 dBA	Developed lands, properties or activities not included in categories A and B above.					55	55	50	45
						1 p.m.				
						2	59	55	51	46
						3	60	57	55	47
						4	60	58	56	50
						5	61	58	56	47
						6	63	58	58	53
						7	63	58	56	54
						8	60	58	55	51
						9	60	57	52	48
						10	59	56	51	49
E	55 dBA	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.					55	55	50	45
						1 p.m.				
						2	59	55	51	46
						3	60	57	55	47
						4	60	58	56	50
						5	61	58	56	47
						6	63	58	58	53
						7	63	58	56	54
						8	60	58	55	51
						9	60	57	52	48
						10	59	56	51	49
F	50 dBA	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.					55	55	50	45
						1 p.m.				
						2	59	55	51	46
						3	60	57	55	47
						4	60	58	56	50
						5	61	58	56	47
						6	63	58	58	53
						7	63	58	56	54
						8	60	58	55	51
						9	60	57	52	48
						10	59	56	51	49
G	45 dBA	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.					55	55	50	45
						1 p.m.				
						2	59	55	51	46
						3	60	57	55	47
						4	60	58	56	50
						5	61	58	56	47
						6	63	58	58	53
						7	63	58	56	54
						8	60	58	55	51
						9	60	57	52	48
						10	59	56	51	49

1. Criteria are applied at boundary, peak traffic hour.

TABLE 17

DISTRIBUTION OF A-WEIGHTED NOISE LEVELS

(Noise level readings in dBA)

Time of Day	Position 1			Position 2		
	L ₁₀	L ₅₀	L ₉₀	L ₁₀	L ₅₀	L ₉₀
1 a.m.						
2	57	53	48	55	52	51
3	55	51	46	54	49	47
4	55	50	43	54	49	44
5	55	48	41	53	47	43
6	58	52	46	55	51	47
7	60	55	50	57	53	50
8	62	58	55	59	57	52
9	64	61	56	59	57	52
10	64	61	55	59	55	51
11 noon	57	53	50	59	51	47
	58	53	50	52	47	43
				52	48	46
1 p.m.						
2	59	55	51	55	50	45
3	59	55	51	57	48	46
4	60	57	55	55	47	43
5	60	58	56	56	50	47
6	61	58	56	58	53	50
7	63	58	56	58	54	51
8	63	58	56	59	54	51
9	60	58	55	55	52	48
10	60	57	52	55	52	49
11	59	56	51	56	53	51
midnight	59	55	51	55	52	50
	57	54	50	54	52	48

Position 1: On railroad right-of-way, midway on site. Readings taken 3-4 January 1973.

Position 2: 1,250 feet east of Position 1. Readings taken 4-5 January 1973.

Source: Sedway/Cooke (1973)

TABLE 19
ESTIMATED ULTIMATE SETTLEMENT

Boring Number	Elev. of Compacted Fill (feet)	Thickness of Soft Mud (feet)	Thickness of Mod. Firm Mud (feet)	Estimated Ultimate Settlement (inches)	
				Soft Mud	Moderately Firm Mud
4A	7.0	20	81	27	10
9	6.0	16 1/2	25 1/2	18	3
10	6.0	17 1/2	10 1/2	19	1
11	6.0	22	21	26	2
12	6.0	18	32 1/2	21	5
13	6.0	26	49 1/2	34	6
14	6.0	18	48	21	7
15	6.0	20 1/2	49 1/2	24	7
16	7.0	27 1/2	50 1/2	34	7
17	7.0	32 1/2	39	42	5
18	7.0	20 1/2	74	27	11
19	7.0	32	71 1/2	40	9
20	7.0	28 1/2	28 1/2	37	3
21	7.0	29	49	37	8
22	7.0	36 1/2	55 1/2	32	3
23	7.0	39	31 1/2	32	3

Source: LeRoy Crandall and Associates (1972)

TABLE 18
HOUSING CHARACTERISTICS FOR CORTE MADERA, MARIN COUNTY AND SAN FRANCISCO-OAKLAND SMSA (1970)

HOUSING CHARACTERISTIC	WEST OF FREEMAN	EAST OF FREEMAN	TOTAL CORTE MADERA Number Percent	MARIN COUNTY Number Percent	SAN FRANCISCO-OAKLAND SMSA* Number Percent
Type					
Single-family detached	1,785	651	2,436 75.5	52,350 73.5	667,109 59.1
Two units	67	0	67 2.1	4,068 5.7	81,666 7.2
Three or more units	571	150	720 22.4	14,298 20.0	380,492 33.6
Vacant, seasonal	0	0	0 0	540 0.8	972 0.1
TOTAL HOUSING UNITS	2,423	801	3,224 100.0	71,241 100.0	1,130,239 100.0
Ownership					
Owner-occupied units	1,503	551	2,054 63.7	41,154 57.8	560,749 49.6
Renter-occupied units	836	217	1,053 32.7	26,452 37.1	525,103 46.5
Vacant, year round	84	33	117 3.6	3,095 4.3	43,415 3.8
Vacant, seasonal	0	0	0 0	540 0.8	972 0.1
Year built (excluding vacant, seasonal)					
Pre - 1950	716	104	820 25.4	23,958 33.9	596,211 52.7
1950 - 1964	1,573	382	1,955 60.7	36,325 51.4	410,185 36.3
1965 - 1970	134	315	449 13.9	10,419 14.7	123,843 11.0
Value of Owner-occupied Units					
Less than \$15,000	17	10	27 1.3	851 2.1	57,780 5.4
\$15,000 - \$24,999	253	27	280 13.6	7,715 18.7	216,780 38.6
\$25,000 - \$34,999	832	213	1,045 50.9	13,559 32.9	178,106 31.8
\$35,000 - \$49,999	388	225	613 29.8	11,517 28.0	89,526 16.0
\$50,000 or more	81	8	89 4.4	7,512 18.3	45,916 8.2
Median value	\$31,200	\$34,600	\$33,000	\$33,900	\$26,000
Median rent	\$ 161	\$ 271	\$ 178	\$ 161	\$ 130
Persons per Housing Unit					
1 person	414	70	484 15.5	11,991 17.7	282,249 26.2
2 - 3 persons	1,229	379	1,608 51.8	33,088 48.9	505,023 46.5
4 - 5 persons	586	264	850 27.4	17,784 26.4	239,097 22.0
5 or more persons	110	55	165 5.3	4,743 7.0	79,483 7.3
Average number of persons/unit	2.82	3.23	2.92	3.05	2.86
Persons/Room/Housing Unit					
1.00 persons or less	2,269	743	3,012 97.0	65,177 96.4	1,019,641 94.0
1.01 - 1.50 persons	81	24	105 3.3	1,886 2.8	47,102 4.3
1.51 persons or more	9	1	10 0.3	543 0.8	19,109 1.7

*Includes Marin, Alameda, San Francisco, San Mateo and Contra Costa Counties.

Source: Town of Corte Madera (1973)

TABLE 20

ANTICIPATED CONSTRUCTION NOISE LEVEL

Construction Phase	Equipment	Construction Noise Level @ 50' from Observer, dBA
Ground Clearing	Truck	91
	Scraper	88
	Jack Hammers	88
Excavation	Rock Drill	98
	Truck	91
Foundation	Concrete Mixer	85
	Jack Hammers	88
Erection	Concrete Mixer	85
	Crane	88
	Jack Hammer	88
Finishing	Rock Drill	98
	Truck	91

Source: Sedway/Cooke (1973)

TABLE 21

ESTIMATED ORIENTATION AND ROUTES
OF
SHOPPING CENTER TRAFFIC

Origin	Route	Percent of Center Traffic
North, Northwest	Route 101 Freeway	65
South, Southwest	Route 101 Freeway	22
West	Tamalpais Drive, Nellen Avenue	10
Southeast	San Clemente Drive	3
		<u>100</u>

Source: Donald Frischer & Associates (1971)

* * * * *

TABLE 22

SHOPPING CENTER TRAFFIC GENERATION

WEEKDAY	TOTAL BUSINESS DAY PEAK HOURS	NUMBER OF VEHICLES	
		First Year* Entering Leaving	Future** Entering Leaving
Commuter (approximately 5:00 p.m. to 6:00 p.m.)	Entering Center (approximately 7:00 p.m. to 8:00 p.m.) Leaving Center (approximately 9:00 p.m. to 10:00 p.m.)	20,000	20,000
		1,700	1,800
		2,300	1,500
		500	2,100
		25,000	25,000
SATURDAY	TOTAL BUSINESS DAY PEAK HOUR (approximately 2:00 p.m. to 3:00 p.m.)	25,000	25,000
		3,000	2,900
		3,400	3,200

* With Existing Freeway Interchanges

**Within Five Years

Source: Donald Frischer & Associates (1971)

TABLE 23

SHOPPING CENTER TRAFFIC
IMPACT ON U.S. 101Existing Traffic on U.S. 101Lucky Drive Int. Bridgeway Int.Total
Peak94,000
10,40095,000
10,400Shopping Center TrafficNumber of Vehicles
Generated by CenterCenter Traffic on U.S. 101
North (65%) South (22%)Total
Peak40,000
3,50026,000 8,800
2,275 770Percent Increase in Traffic on U.S. 101 Due to CenterLucky Drive Int.Bridgeway Int.Total
Peak28%
22%9%
7%

TABLE 24

PUBLIC HEARING SUMMARY

2/1/72	Town Council conducted Public Hearing and introduced Ordinance No. 539 to rezone 17 acres from M-1 to C-2 subject to all individual parcels being consolidated into a single assessor's parcel for purposes of overall development of the property.
8/16/72	Town Council conducted Public Hearing and introduced Ordinance No. 552, rezoning 57 acres from M-1 to C-2.
2/13/73	Planning Commission opened Public Hearing on the Corte Madera Redevelopment Project No. 1 Environmental Impact Report (EIR).
2/14/73	Planning Commission continuation of Public Hearing on EIR for Redevelopment Plan.
2/27/73	Planning Commission continuation of Public Hearing on EIR for Redevelopment Plan.
3/19/73	Joint Public Hearing of Town Council and Redevelopment Agency on Redevelopment Plan.
3/26/73	Joint Public Hearing of Town Council and Redevelopment Agency on Redevelopment Plan.
4/16/73	Joint Public Hearing of Town Council and Redevelopment Agency on Redevelopment Plan. Introduction of an Ordinance approving and adopting the Redevelopment Plan.
6/5/73	San Francisco District, U.S. Army Corps of Engineers, conducted Public Hearing in Corte Madera on the proposed Corte Madera Shopping Center.
6/12/73	Continuation of Corps Public Hearing.

TABLE A

MARIN COUNTY AIR QUALITY, 1976
(Micrograms/cubic meter)

	Standard	1976 Concentration
<u>CARBON MONOXIDE</u>		
Annual Mean	No std	689
Max 1-hr	40000	23254
Max 8-hr	10000	7700
Max 24-hr	No std	3859
0600-0900	No std	9720
<u>ORGANICS</u>		
Annual Mean	No std	103
Max 1-hr	No std	3408
Max 8-hr	No std	1077
Max 24-hr	No std	577
0600-0900	160	1547
<u>NITROGEN DIOXIDE</u>		
Annual Mean	100	6
Max 1-hr	500	73
Max 8-hr	No std	31
Max 24-hr	No std	21
0600-0900	No std	45
<u>SULFUR OXIDES</u>		
Annual Mean	No std	6
Max 1-hr	1300	186
Max 8-hr	No std	63
Max 24-hr	100	35
0600-0900	No std	91
<u>PARTICULATES</u>		
Annual Mean	60	14
Max 1-hr	No std	189
Max 8-hr	No std	78
Max 24-hr	100	49
0600-0900	No std	103

Source: Marin Mall Regional Shopping Center; Environmental Impact Report.

TABLE B

PROJECTED LOCAL CONCENTRATIONS OF AIR POLLUTANTS
(Micrograms/cubic meter)

	Standard	1	2	3	4	5	*Percent Increase
<u>CARBON MONOXIDE</u>							
Annual Mean	No std	689	385	553	311	476	53.1
Max 1-hr	40000+	23254	13456	18348	11127	15687	42.8
Max 8-hr	10000+	7700	4157	6854	3468	6139	77.0
Max 24-hr	No std	3859	2159	3108	1743	2678	53.6
0600-0900	No std	9720	5727	6304	4561	5116	12.2
<u>ORGANICS</u>							
Annual Mean	No std	103	57	74	47	64	36.2
Max 1-hr	No std	3408	1946	2450	1655	2132	28.8
Max 8-hr	No std	1077	585	844	498	753	51.2
Max 24-hr	No std	577	320	418	267	363	36.0
0600-0900	160+	1547	887	968	741	819	22.9
<u>NITROGEN DIOXIDE</u>							
Annual Mean	100+	6	4	5	5	5	0
Max 1-hr	470 Δ	73	50	59	56	65	16.1
Max 8-hr	No std	31	21	26	23.8	29	26.1
Max 24-hr	No std	21	14	17	21.4	19	18.8
0600-0900	No std	45	31	36	16.1	40	17.6
<u>SULFUR OXIDES (Sulfur Dioxide)</u>							
Annual Mean	No std	6	8	10	8	10	25.0
Max 1-hr	1310 Δ	188	244	302	244	302	23.8
Max 8-hr	No std	63	79	113	79	113	43.0
Max 24-hr	105 Δ	35	44	57	44	57	29.5
0600-0900	No std	91	116	126	116	126	8.6
<u>PARTICULATES</u>							
Annual Mean	60 Δ	14	9	12	9	12	33.3
Max 1-hr	No std	189	137	175	137	175	27.7
Max 8-hr	No std	78	55	82	55	82	49.1
Max 24-hr	100 Δ	49	34	46	34	46	35.3
0600-0900	No std	103	75	89	75	89	18.7

ALTERNATES*

- 1: 1976 activity levels
 2: Projected 1985 levels without Marin Mall
 3: Projected 1985 levels with Marin Mall
 4: Alternate 2 plus two additional freeway lanes
 5: Alternate 3 plus two additional freeway lanes
 # Percent increase attributed to Marin Mall, as reflected in Alternate 3
 * Percent increase attributed to Marin Mall, as reflected in Alternate 5
 + Federal standard
 Δ State of California standard

Source: Marin Mall Regional Shopping Center; Environmental Impact Report

TABLE C

AIR QUALITY
PROJECTED REGIONAL INCREMENTS
(Micrograms/cubic meter)

	Standard	1	2	3	4	5
<u>CARBON MONOXIDE</u>						
Annual Mean	No std	1.56	0.87	1.25	0.70	1.08
Max 1-hr	40000	20.72	11.99	16.35	9.91	14.15
Max 8-hr	10000	8.96	4.84	7.98	4.04	7.15
Max 24-hr	No std	5.14	2.88	4.14	2.32	3.57
0600-0900	No std	9.97	5.88	6.47	4.68	5.25
<u>ORGANICS</u>						
Annual Mean	No std	0.23	0.13	0.17	0.11	0.14
Max 1-hr	No std	3.04	1.73	2.18	1.47	1.90
Max 8-hr	No std	1.25	0.68	0.98	0.58	0.88
Max 24-hr	No std	0.77	0.43	0.56	0.36	0.48
0600-0900	160	1.59	0.91	0.99	0.76	0.84
<u>NITROGEN DIOXIDE</u>						
Annual Mean	100	0.01	0.01	0.01	0.01	0.01
Max 1-hr	500	0.16	0.11	0.13	0.12	0.14
Max 8-hr	No std	0.07	0.05	0.06	0.05	0.07
Max 24-hr	No std	0.05	0.03	0.04	0.04	0.04
0600-0900	No std	0.10	0.07	0.08	0.08	0.09
<u>SULFUR OXIDES</u>						
Annual Mean	No std	0.01	0.02	0.02	0.02	0.02
Max 1-hr	1300	0.17	0.22	0.27	0.22	0.27
Max 8-hr	No std	0.07	0.09	0.13	0.09	0.13
Max 24-hr	100	0.05	0.06	0.08	0.06	0.08
0600-0900	No std	0.09	0.12	0.13	0.12	0.13
<u>PARTICULATES</u>						
Annual Mean	60	0.03	0.02	0.03	0.02	0.03
Max 1-hr	No std	0.37	0.27	0.35	0.27	0.35
Max 8-hr	No std	0.17	0.12	0.17	0.12	0.17
Max 24-hr	100	0.11	0.07	0.10	0.07	0.10
0600-0900	No std	0.21	0.15	0.18	0.15	0.18

ALTERNATES

- 1: 1976 activity levels
 - 2: Projected 1985 levels without Marin Mall
 - 3: Projected 1985 levels with Marin Mall
 - 4: Alternate 2 plus two additional freeway lanes
 - 5: Alternate 3 plus two additional freeway lanes
- Source: Marin Mall Regional Shopping Center; Environmental Impact Report

TABLE D

AIR QUALITY
ALTERNATES TWO AND THREE COMPARED
(Concentration in Micrograms/cubic meter)

	(3) 1985 Level with Marin Mall	(2) 1985 Level w/o Mall	1985 Project Added Concentr.	1976 Activity Level	Standard
<u>CARBON MONOXIDE</u>					
Max 1-hr	18348	13456	4892	23254	40000
<u>ORGANICS</u>					
0600-0900	968	887	81	1547	160
<u>NITROGEN DIOXIDE</u>					
Max 1-hr	59	50	9	73	470
<u>SULFUR OXIDES</u>					
Max 1-hr	302	244	58	188	1310
<u>PARTICULATES</u>					
Max 24-hr	46	34	12	49	100

TABLE F
RANGE OF POTENTIAL TAXABLE SALES
MARIN MALL REGIONAL CENTER

Type	G.L.A. ^a	Annual Taxable Retail Sales per Sq.Ft. G.L.A. ^a		Total Annual Taxable Retail Sales	
		"Early Development"	"Ultimate Development"	"Early Development"	"Ultimate Development"
Major Dept. Stores	323,000 Sq. Ft.	\$75	\$100	\$24,225,000	\$32,000,000
Mall Tenants	332,000 Sq. Ft.	65	90	21,580,000	29,880,000
Theater	15,000 Sq. Ft.	60	80	900,000	1,200,000
Total	670,000 Sq. Ft.	\$70	\$ 95	\$46,705,000	\$63,380,000

- a - Gross leasable area, or the amount of floor space within the exterior walls of the retail facility.
b - Because retail sales per G.L.A. will depend on the efficiency of the retail store's design, its product mix, and the merchandising success of the store and the shopping center, a range of potential sales is shown.
c - In current dollars.

Source: Lord & LeBlanc (1976)

TABLE E

MARIN MALL SHOPPING CENTER, PROPOSED PROGRAM

Land Use	Area (Sq. Ft.)
Macy's Department Store	180,500
Bullock's Department Store	142,500
Mall Shops A	32,500
Mall Shops B	45,500
Mall Shops C	26,900
Mall Shops D	91,800
Mall Shops E	33,100
Mall Shops F	35,700
Mall Shops G	50,900
Mall Shops H	15,600
Theater	15,000
TOTAL RETAIL AREA	670,000
Open Mall Area	120,000
Landscaped Area	152,460
Parking (3,441 spaces) and Driveways	1,247,440 (28.6 acres)
TOTAL SHOPPING CENTER AREA	3,689,500 (50.3 acres)
Open Space/Wildlife Reserve	1,241,400 (28.5 acres)
San Clemente Drive	257,000 (5.9 acres)
TOTAL SITE AREA	3,689,500 (84.7 acres)

Source: Ernest W. Hahn, Inc.

Gonzales & Oberkamper Civil Engineers, Inc.

Livingston and Associates

TABLE H
MARIN MALL'S PROJECTED IMPACT ON REVENUE SOURCES
OTHER THAN PROPERTY AND SALES TAXES, 1982

Town Revenue Source	Method of Computation	Total 1976 Fiscal Year Revenue	Additional Revenues Attributable To Marin Mall
State Alcoholic Beverage Control	Collected for liquor licenses	\$ 3,500	Negligible
State Motor Vehicle In-Lieu	\$9.35/person/year	\$ 76,240	Negligible
State Section 2107 Gas Tax	\$4.30/person/year	\$ 39,071	Negligible
State 2106 Gas Tax	\$4.76/person/year plus \$400/month	\$ 46,292	Negligible
State Cigarette Tax	One-half of amount = \$1.80/person/year; balance = 6% of sales tax receipts	\$ 43,770	\$38,000
Federal Revenue Sharing	----	\$ 63,202	None
Town Transient Occupancy Tax	6% of charges	\$ 20,000	\$ 4,000
Town Franchise Taxes	Percent of receipts from PC&G, cable TV, and scavenger company	\$ 31,000	\$ 4,000
Business Licenses	\$63 plus special charges based on number of employees and type of business	\$ 32,000	\$25,000
Total		\$355,079	\$71,000

Source: Livingston & Associates (1977)

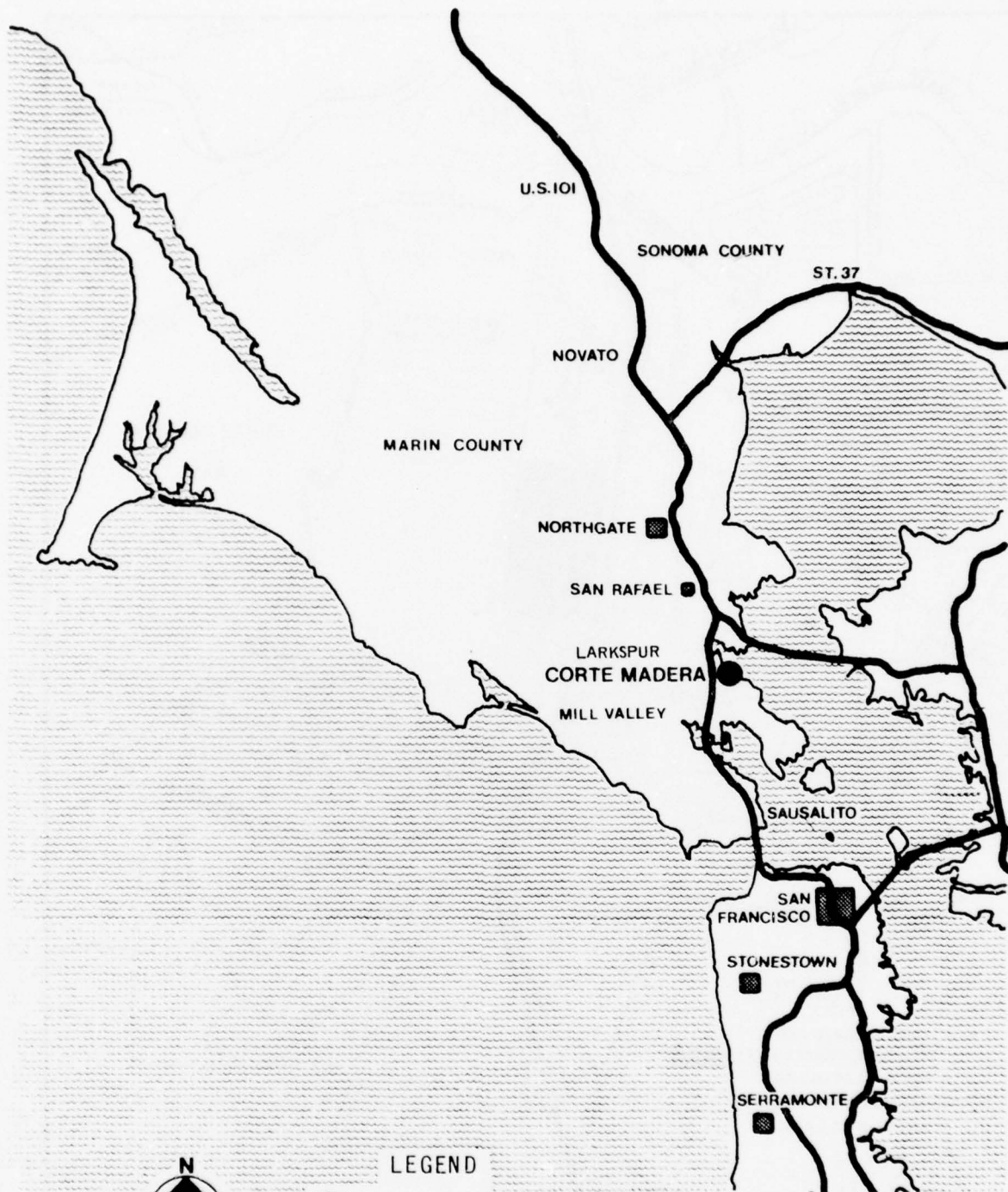
TABLE G
MARIN MALL PROJECTED TAXABLE RETAIL SALES
AND SALES TAX REVENUES

	Fiscal Year Ending			"Ultimate Development" 1982 ^d
	1976 ^a	1978 ^b	1980 ^c	
Major Dept. Stores	None	None	\$24,225,000	\$32,300,000
Mall Tenants	None	None	21,580,000	29,880,000
Theater	None	None	900,000	1,200,000
Projected Total Taxable Retail Sales	None	None	\$46,705,000	\$63,380,000
Sales Tax Revenues at Current Rates (1%) to Town of Corte Madera	0	0	467,050	633,800
Sales Tax Revenues at Current Rates (5%) to All Other Jurisdictions	0	0	\$ 2,335,250	\$ 3,169,000

- a - Although sales tax revenues from the Marin Mall Center itself would not occur during project & construction and prior to leasing, sales tax revenues from existing Corte Madera retail establishments could be expected to increase as construction payroll dollars are spent in existing local stores. These secondary sales tax revenues cannot be quantified however.
- b - With timely approvals, Developer projects Center opening in Fall of 1978 to Spring of 1979; Lord & LeBlanc projects a full calendar year of taxable sales in 1980 at "Early Development" levels of volume.
- c - By 1982 the Marin Mall Center is projected to reach full sales volume with sales per S.F. G.L.A. at the higher "Ultimate Development" levels.

Source: Lord & LeBlanc (1976)

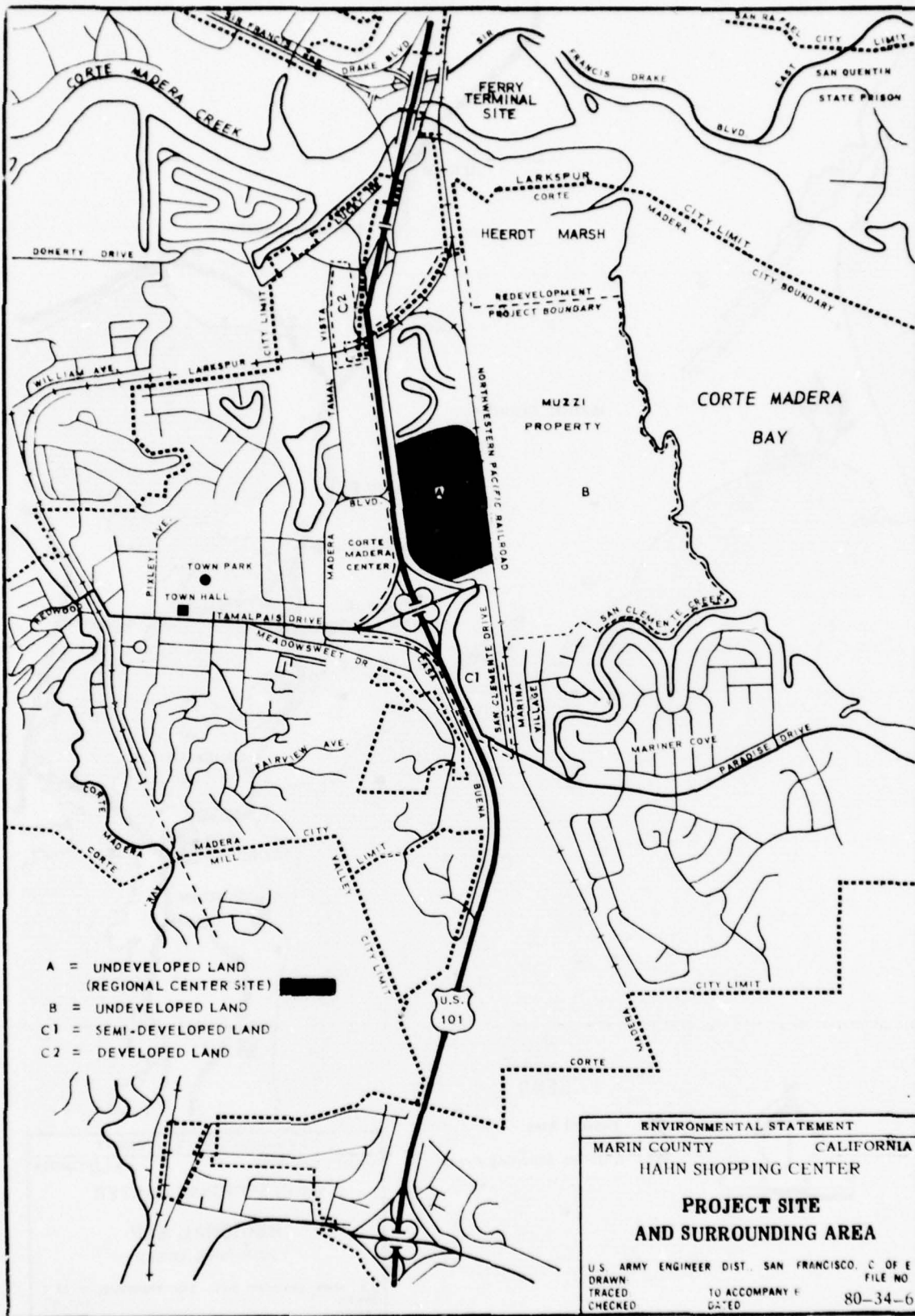
PLATES

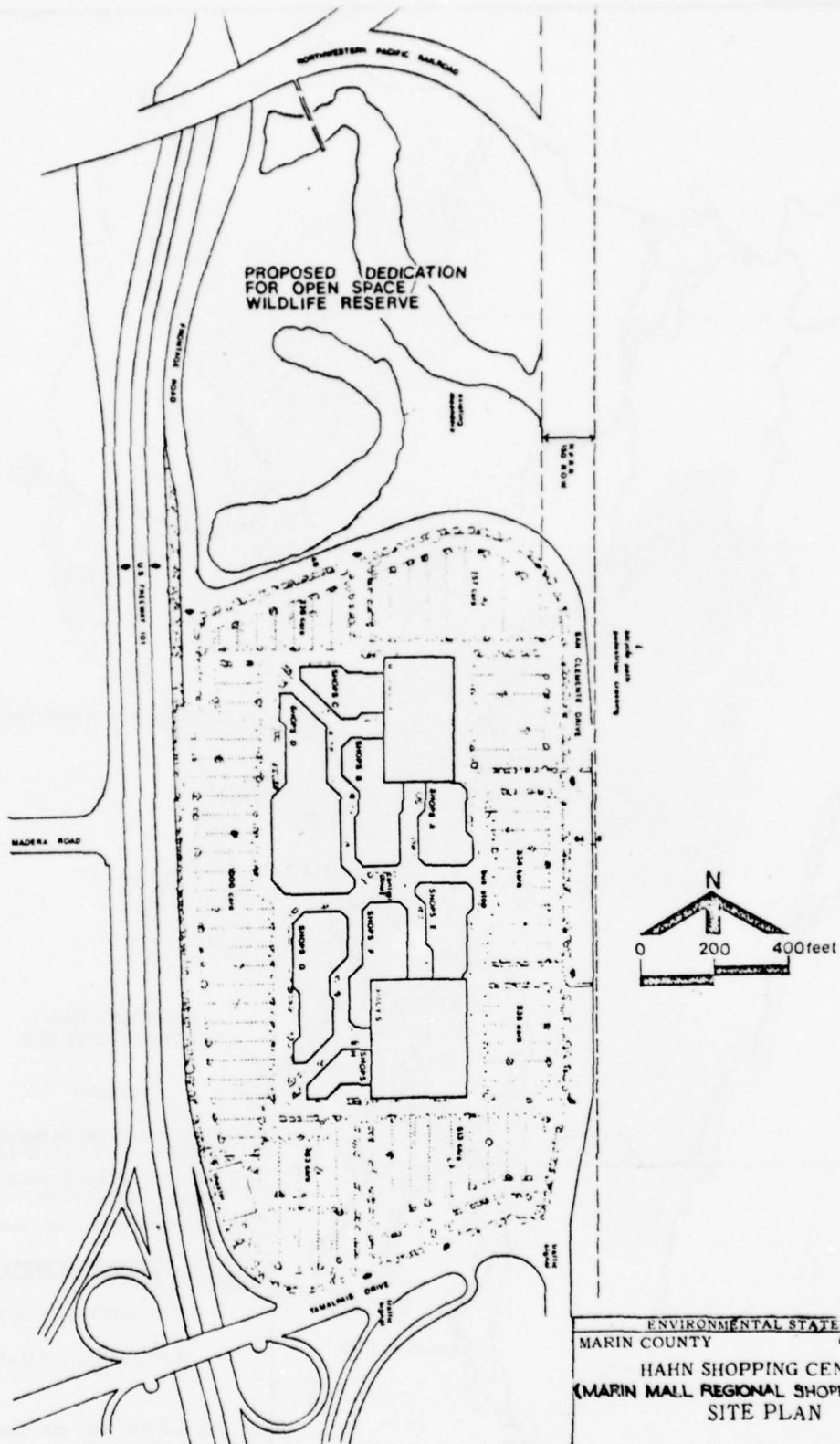


LEGEND

- Project Area
- Existing Shopping Areas

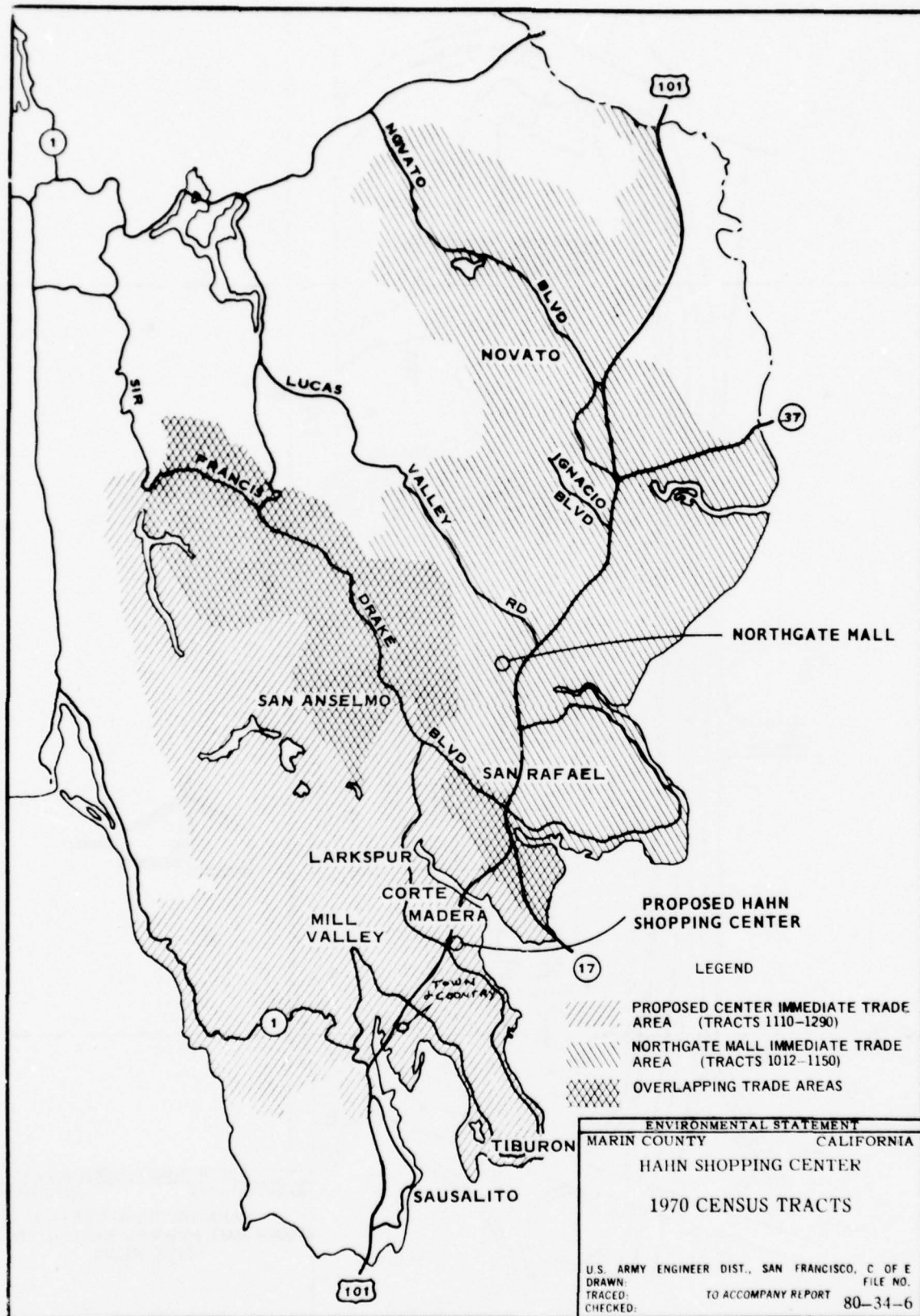
ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
HAHN SHOPPING CENTER	
REGIONAL MAP	
(SHOPPING AREAS)	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C OF E	FILE NO.
DRAWN:	80-34-6
TRACED:	
CHECKED:	

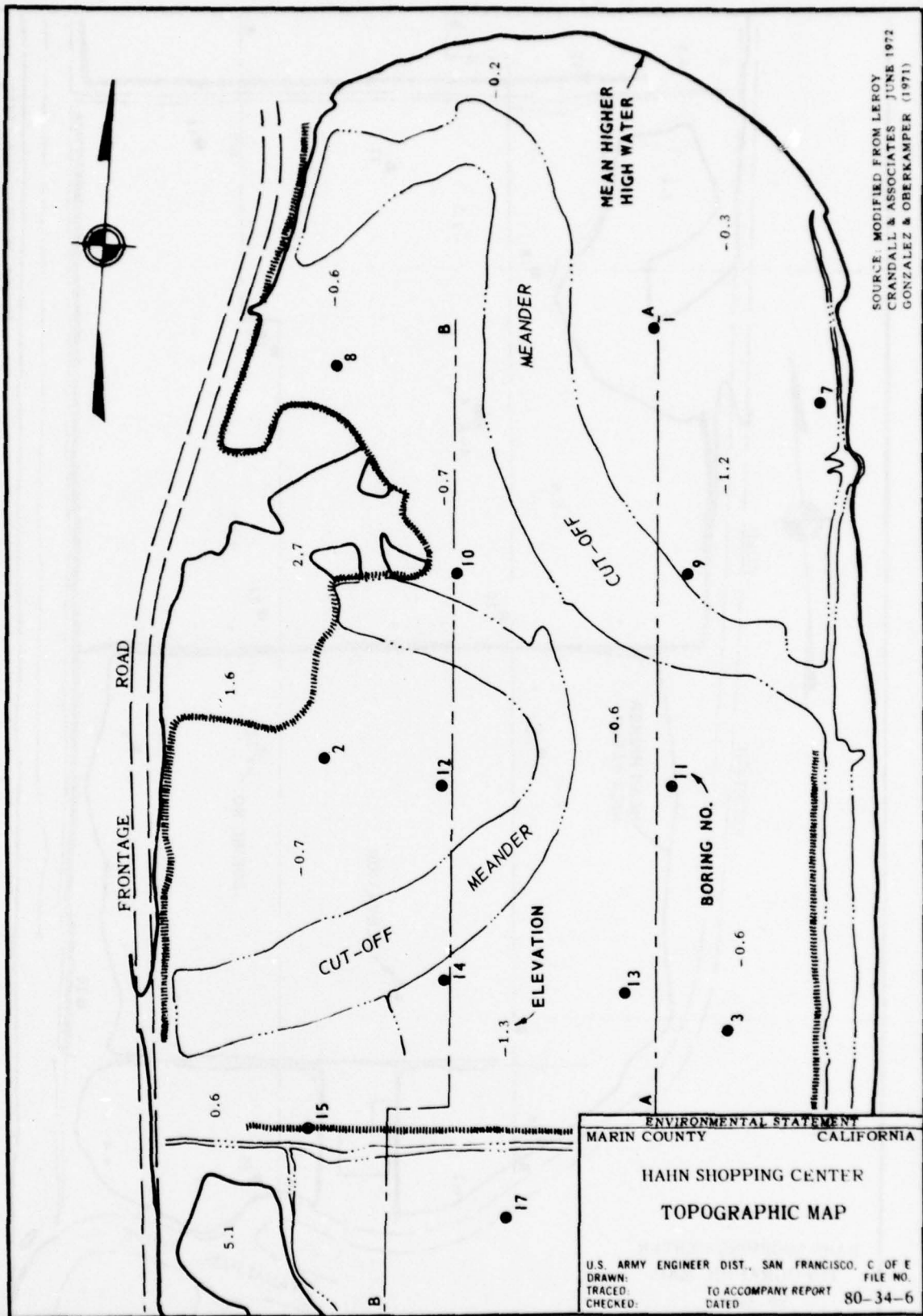




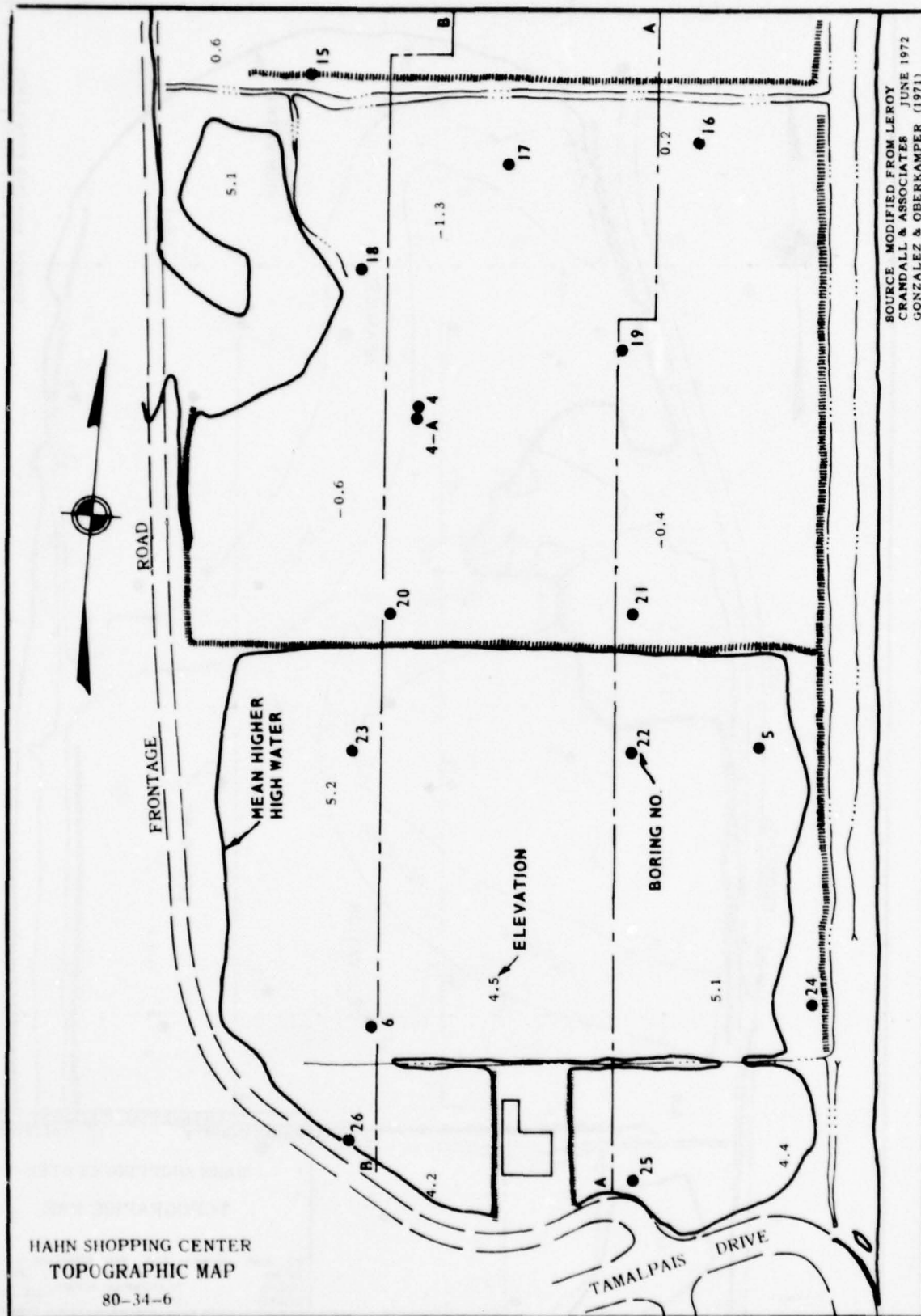
ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
HAHN SHOPPING CENTER	
(MARIN MALL REGIONAL SHOPPING CENTER)	
SITE PLAN	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C. OF E.	
DRAWN	FILE NO.
TRACED	TO ACCOMPANY REPORT 80-34-6
CHECKED	DATED

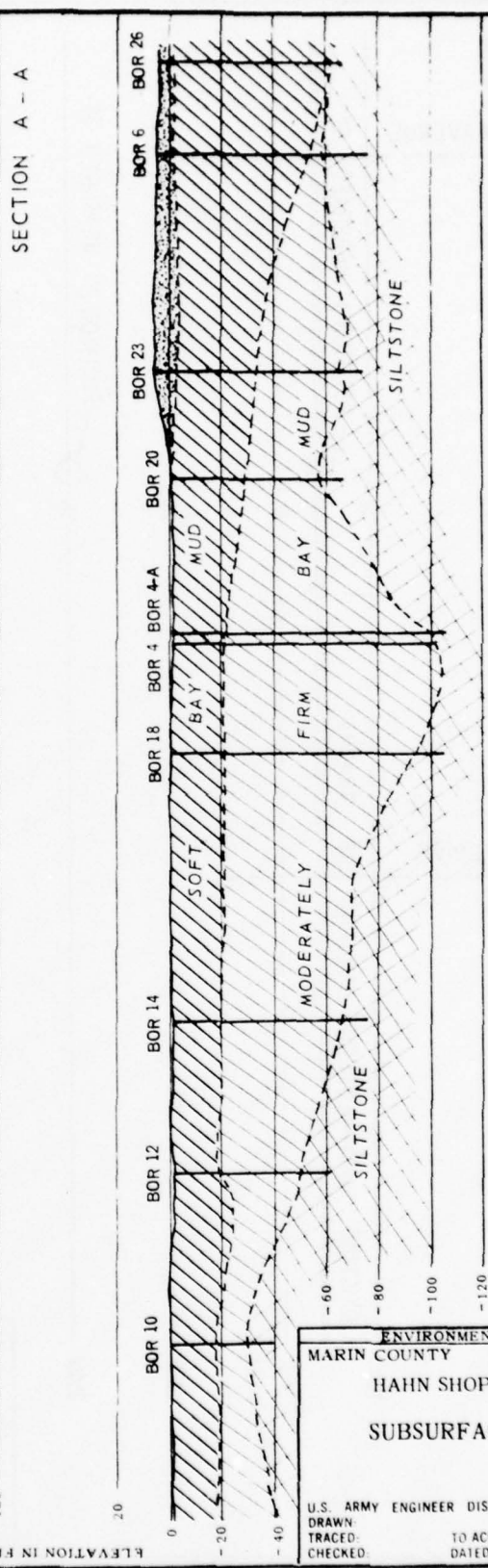
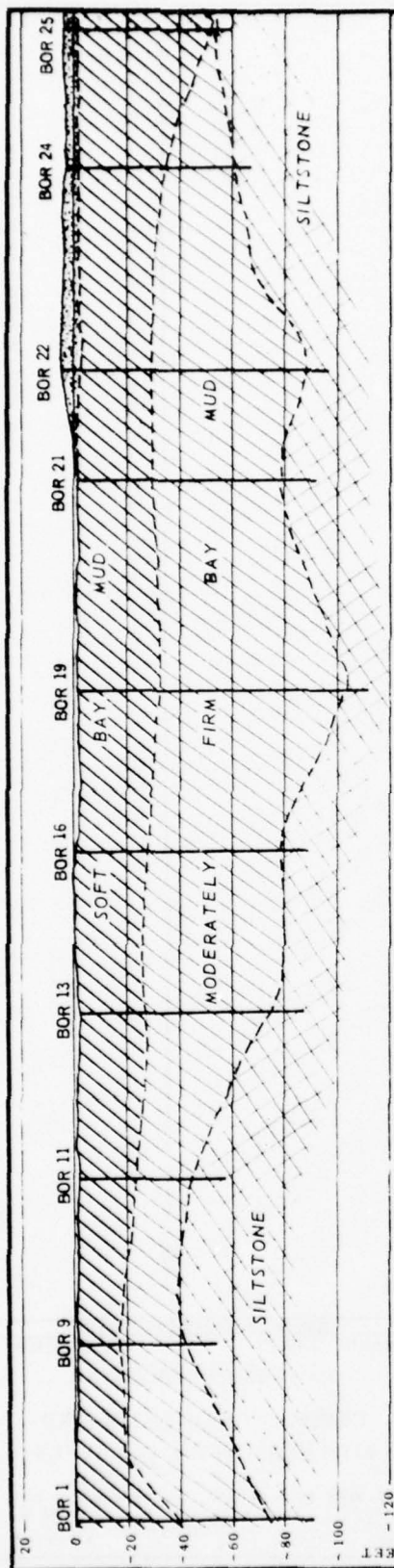
Source: Burke Nicolaís Archuleta, January 1976.





SOURCE: MODIFIED FROM LEROY
CRANDALL & ASSOCIATES JUNE 1972
GONZALEZ & OBERKAMPER (1971)





NOTE:
SECTIONS BASED ON SOIL CONDITIONS AT BORING LOCATIONS.
SOIL CONDITIONS BETWEEN BORINGS HAVE BEEN
INTERPOLATED AND ARE NOT NECESSARILY ACCURATE.

SCALE: HORIZONTAL 1" = 300'
VERTICAL 1" = 60'

ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
HAHN SHOPPING CENTER	
SUBSURFACE SECTIONS	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C OF E	
DRAWN:	FILE NO.
TRACED:	TO ACCOMPANY REPORT
CHECKED:	DATED
80-34-6	

ESTIMATED L₁₀ LEVELS (PEAK HOUR 6-7 P.M.)

in dBA

HIGHWAY 101

WILLIAM AVENUE

TAMALPAIS DRIVE

EXISTING NORTHWESTERN PACIFIC RR TRACKS

62

POSITION 1 MEASURED

62

60

58

POSITION 2 MEASURED

56

53

4000'

SOURCE: MODIFIED FROM SEDWAY/COOKE 1973

ENVIRONMENTAL STATEMENT

MARIN COUNTY CALIFORNIA

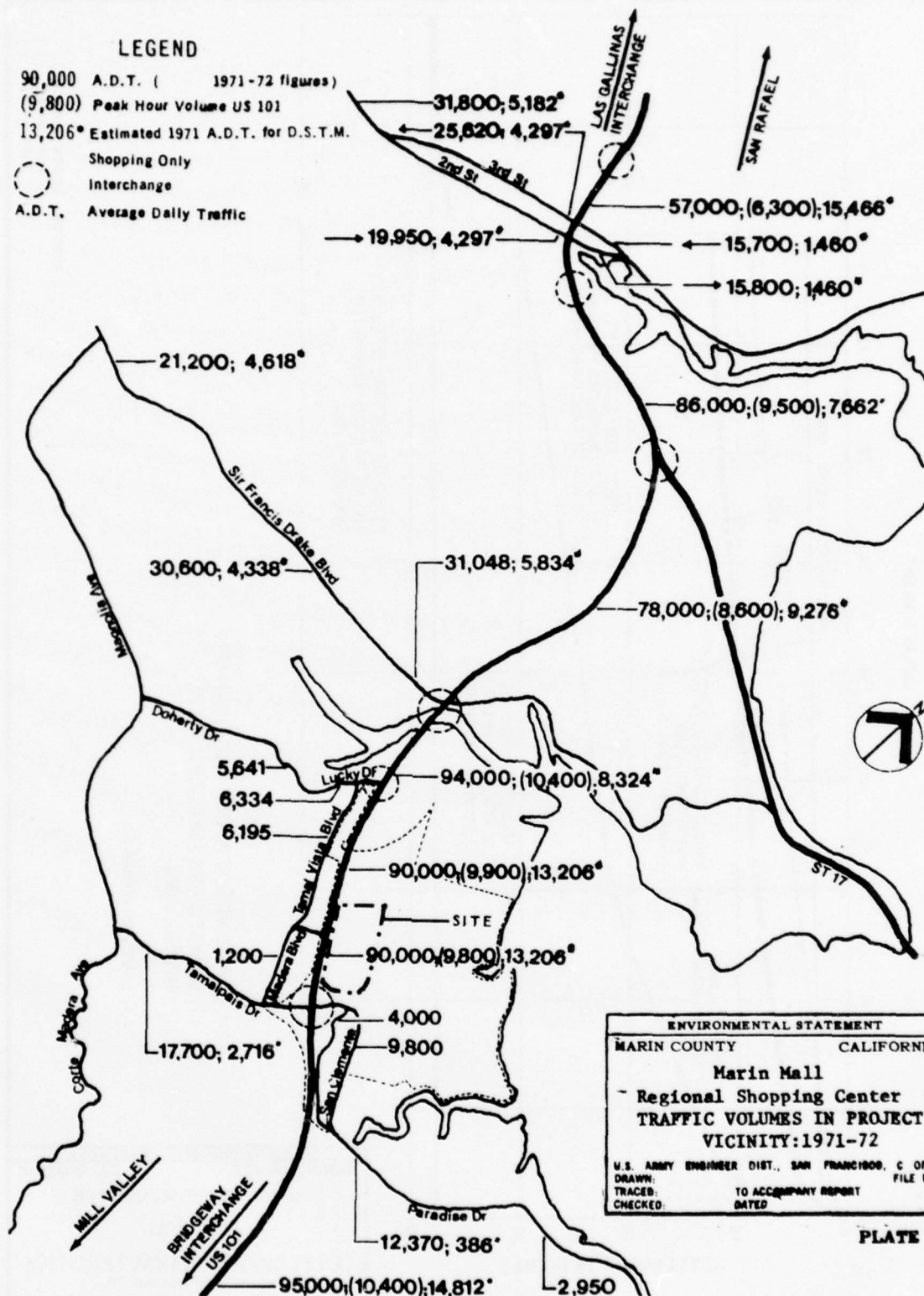
HAHN SHOPPING CENTER

COMPARISON OF ESTIMATED WITH MEASURED L₁₀ LEVELS

U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C. OF E.
DRAWN: FILE NO.
TRACED: TO ACCOMPANY REPORT
CHECKED: DATED 80-34-6

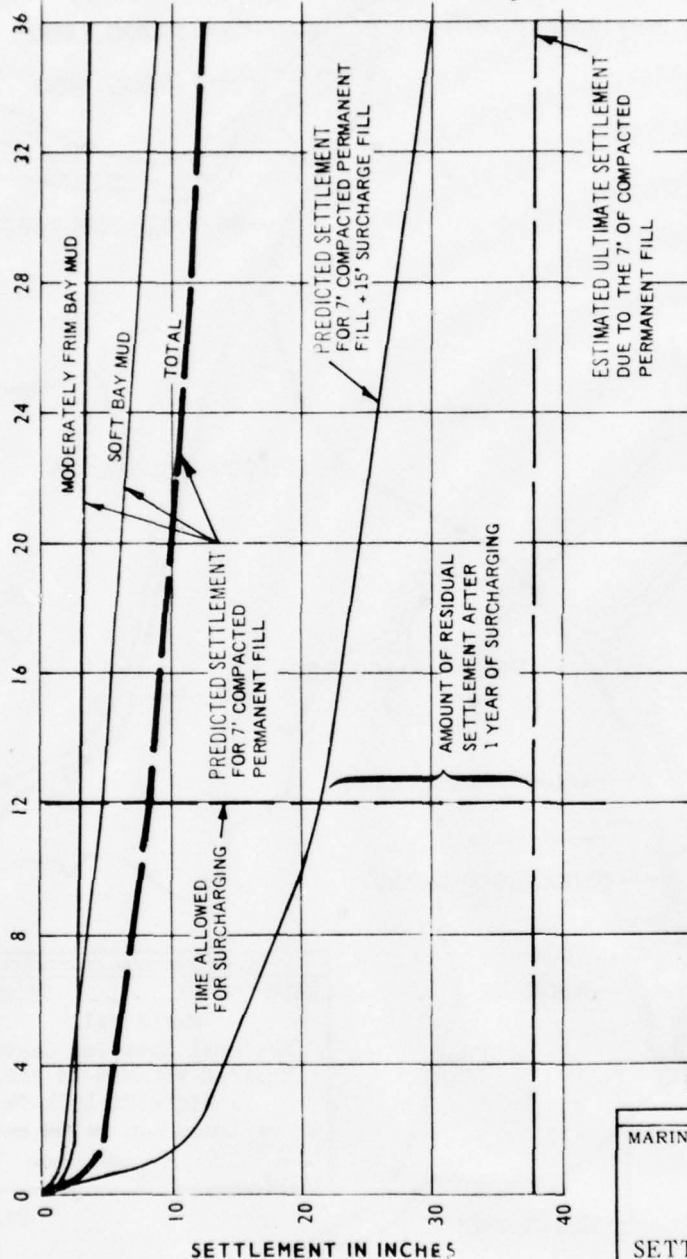
PLATE 7

90,000 A.D.T. (1971-72 figures)
(9,800) Peak Hour Volume US 101
13,206* Estimated 1971 A.D.T. for D.S.T.M.
Shopping Only
Interchange
A.D.T. Average Daily Traffic



SOURCES: State of California, Division of Highways; Marin County Traffic Department; San Rafael Department of Public Works; Corte Madera Department of Public Works; Sedway/Cooke

TIME IN MONTHS



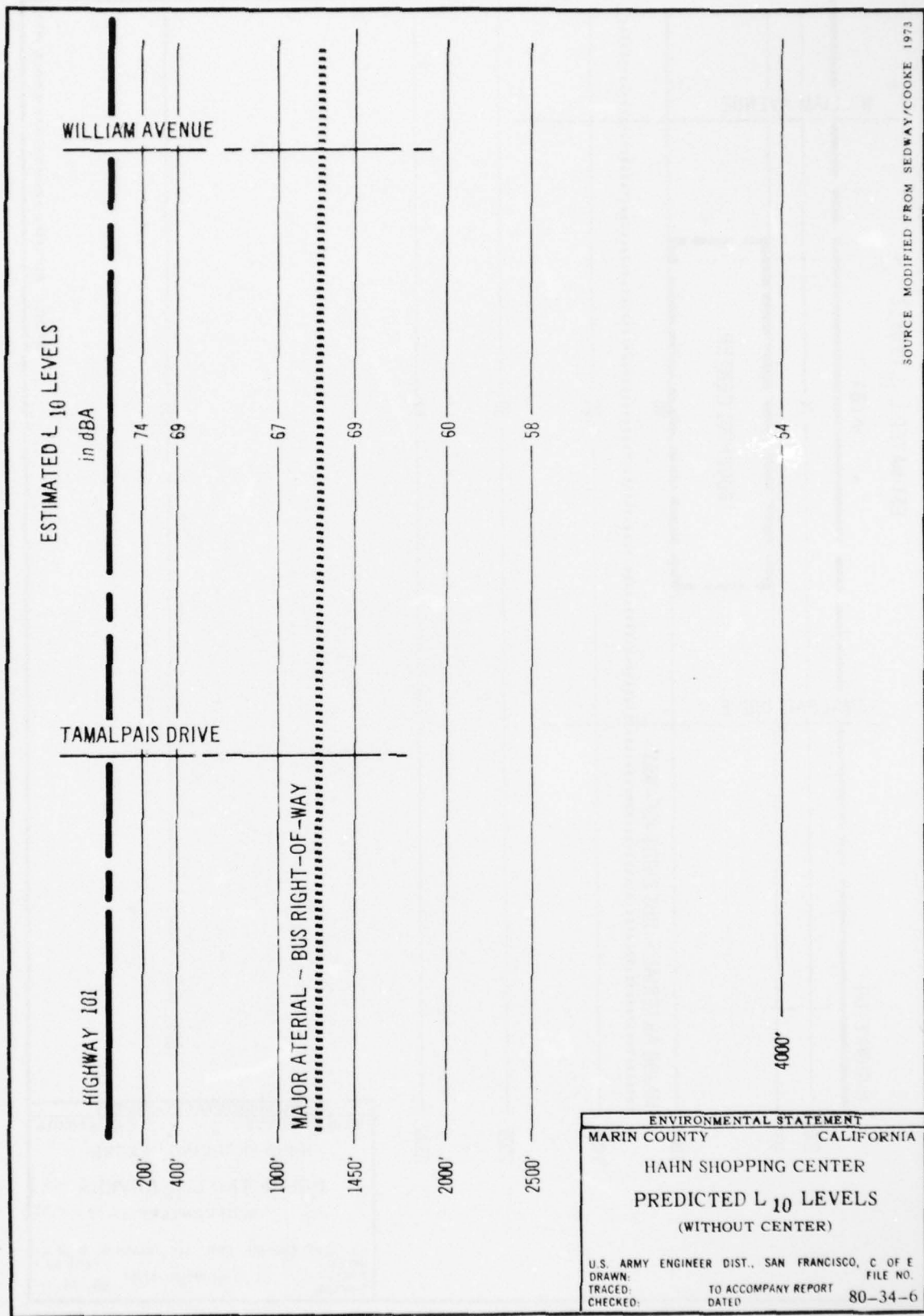
NOTE THE ABOVE DATA INCLUDE 2' OF EQUIVALENT
COMPACTED FILL FOR FLOOR SLAB AND
BUILDING LOADS.

(BASED ON BORING 13)

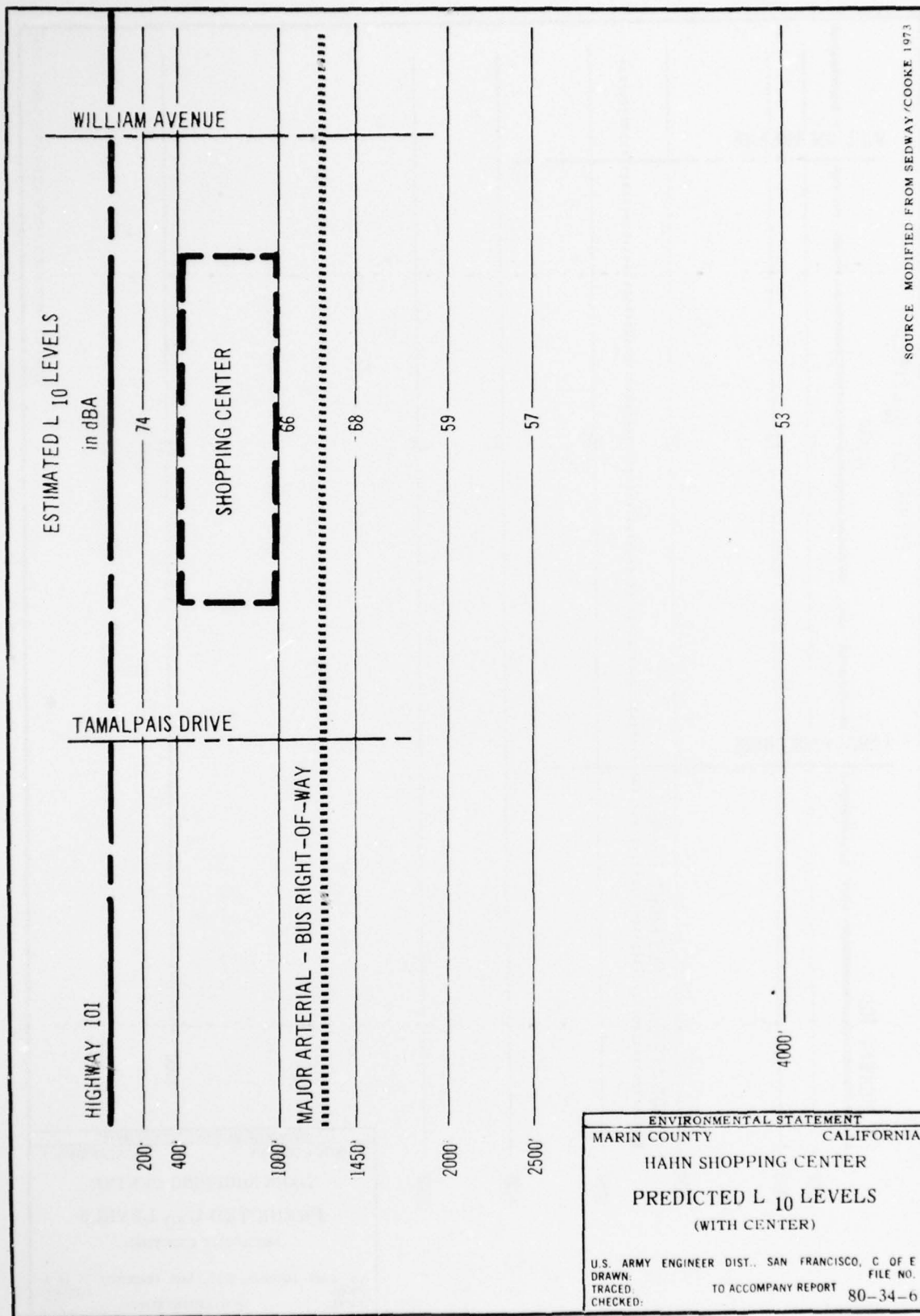
ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
HAHN SHOPPING CENTER	
TYPICAL	
SETTLEMENT CHARACTERISTICS	
(BASED ON BORING 13)	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C OF E	
DRAWN:	FILE NO.
TRACED:	TO ACCOMPANY REPORT
CHECKED:	80-34-6

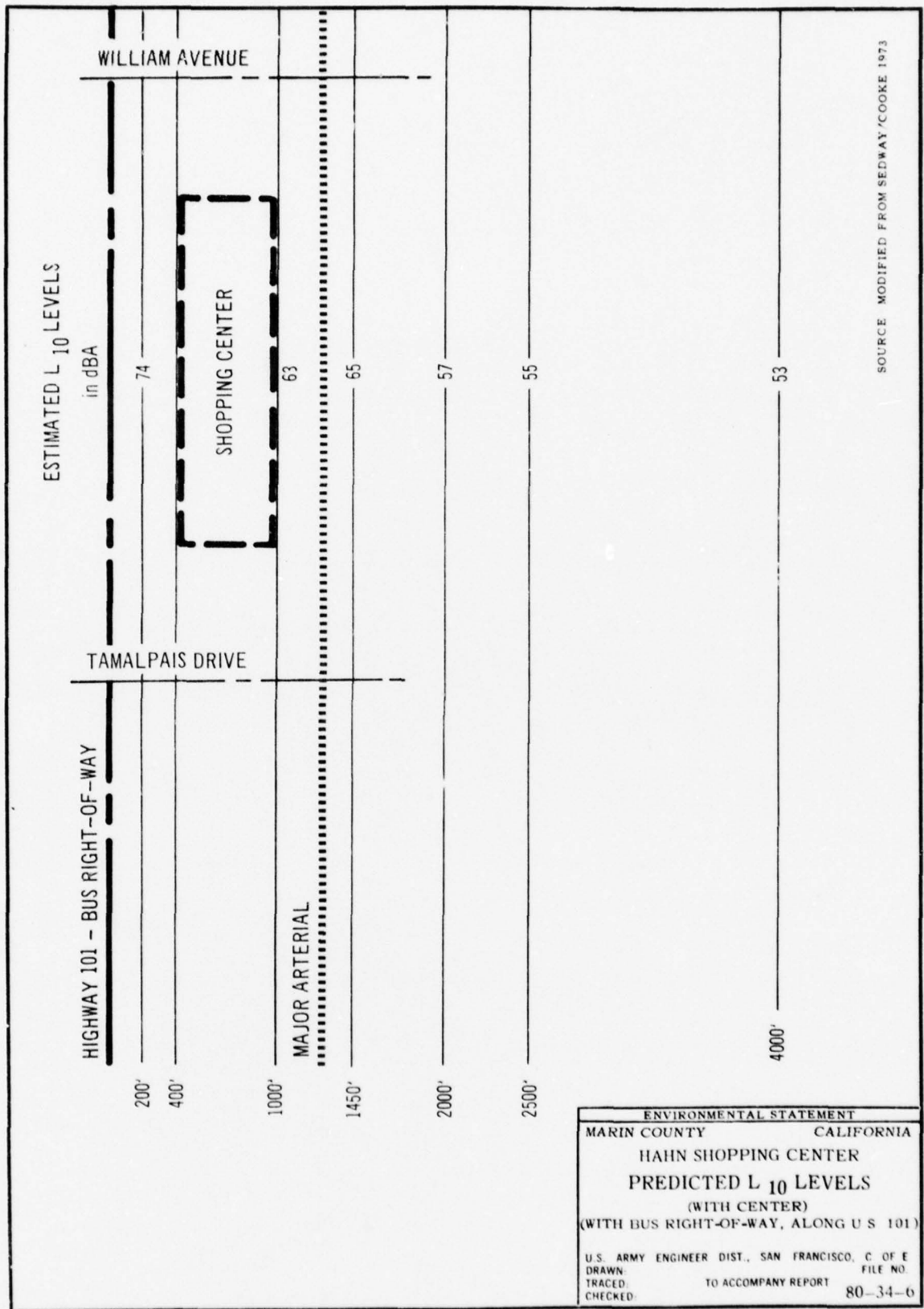
PLATE 9

SOURCE LEROY CRANDALL
& ASSOCIATES
19 JUNE 1972

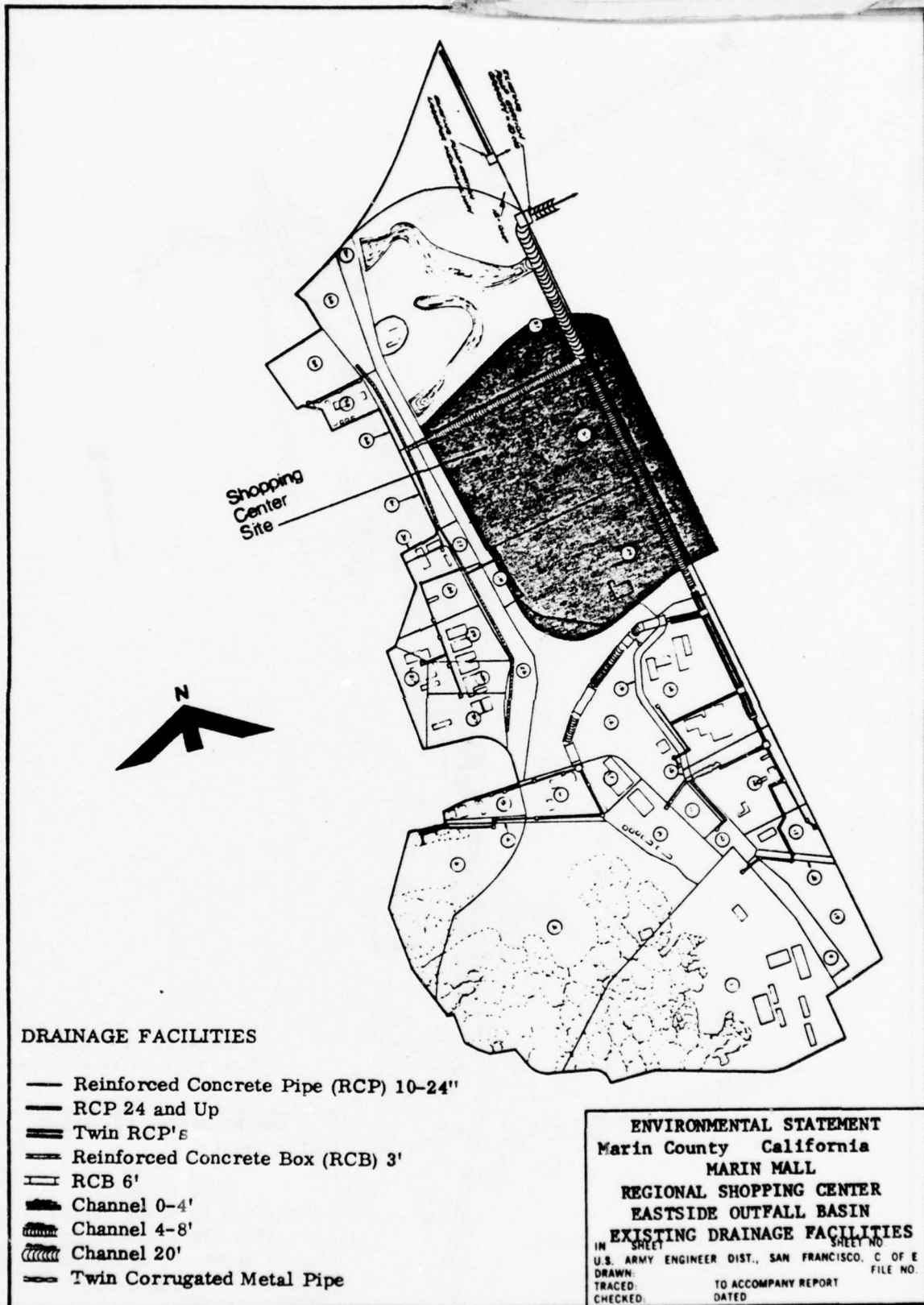


SOURCE MODIFIED FROM SEDWAY/COOKE 1973



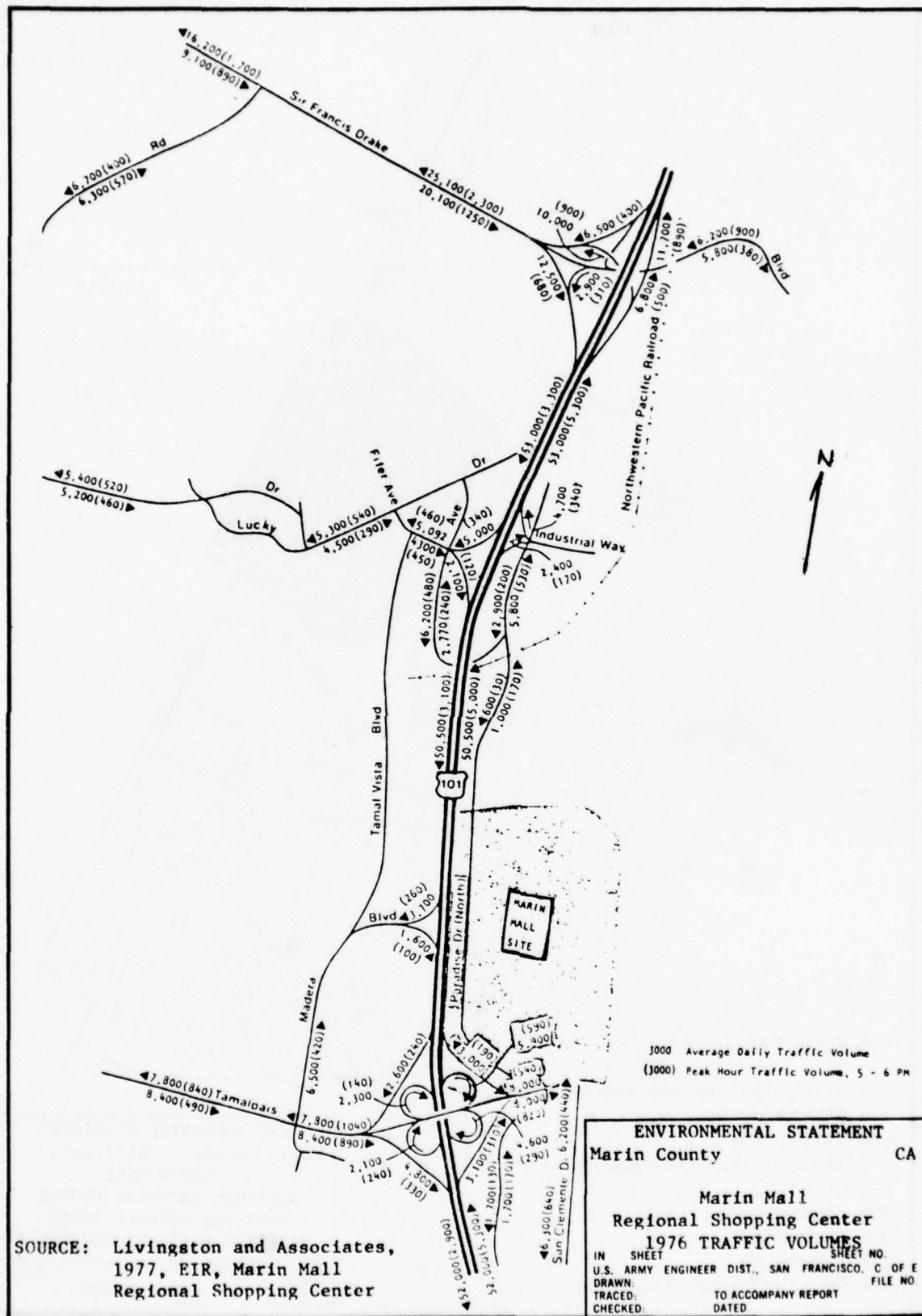


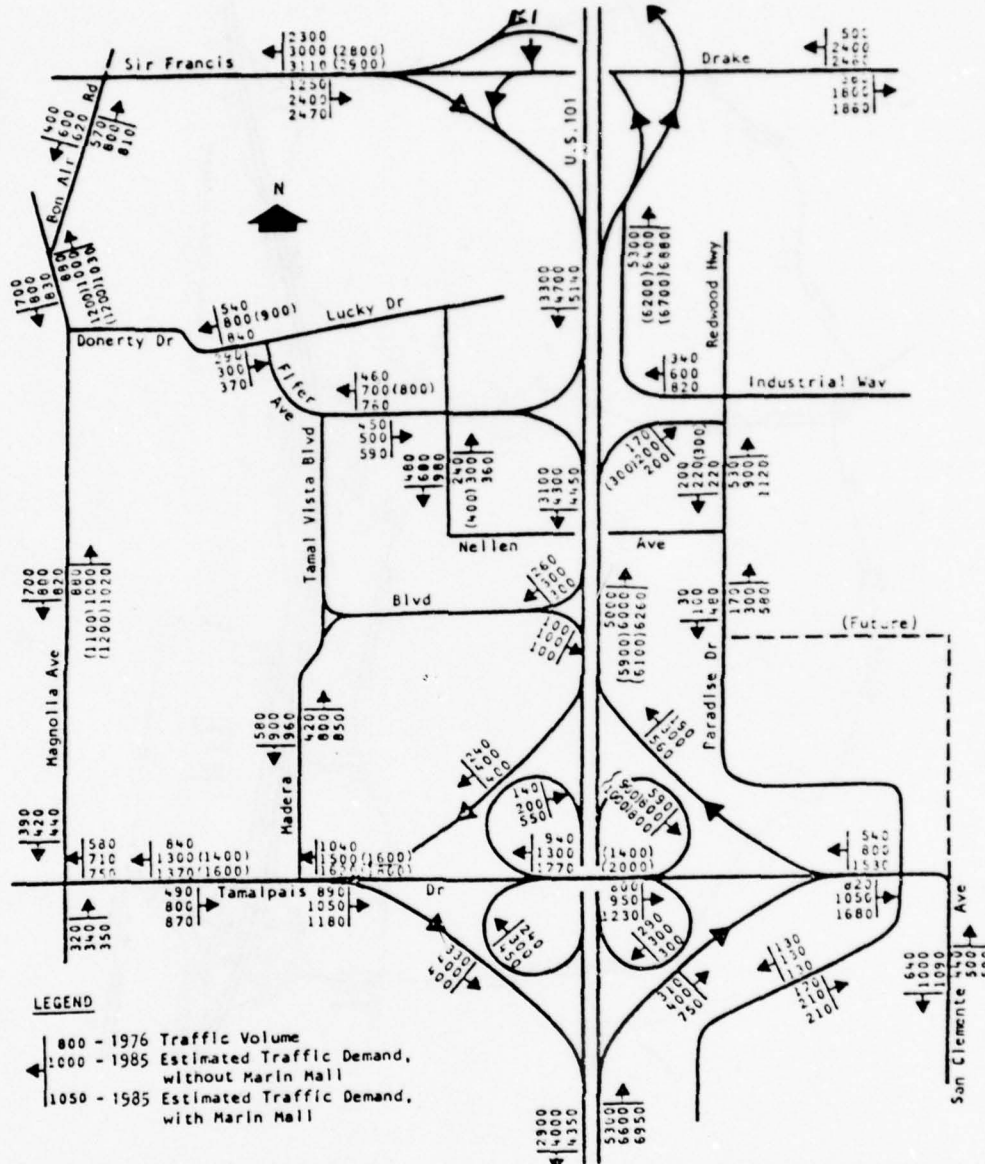
SOURCE MODIFIED FROM SEDWAY/COOKE 1973



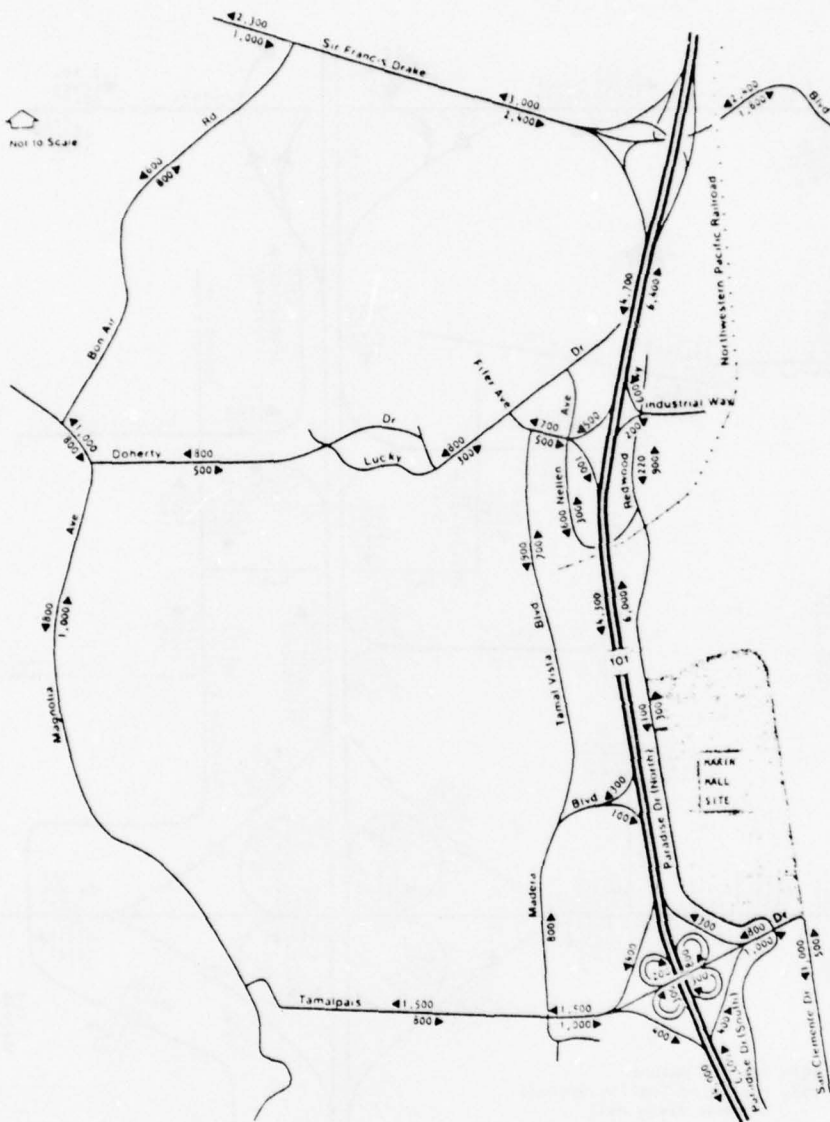
SOURCE: Storm Engineering, March 1976

PLATE 14





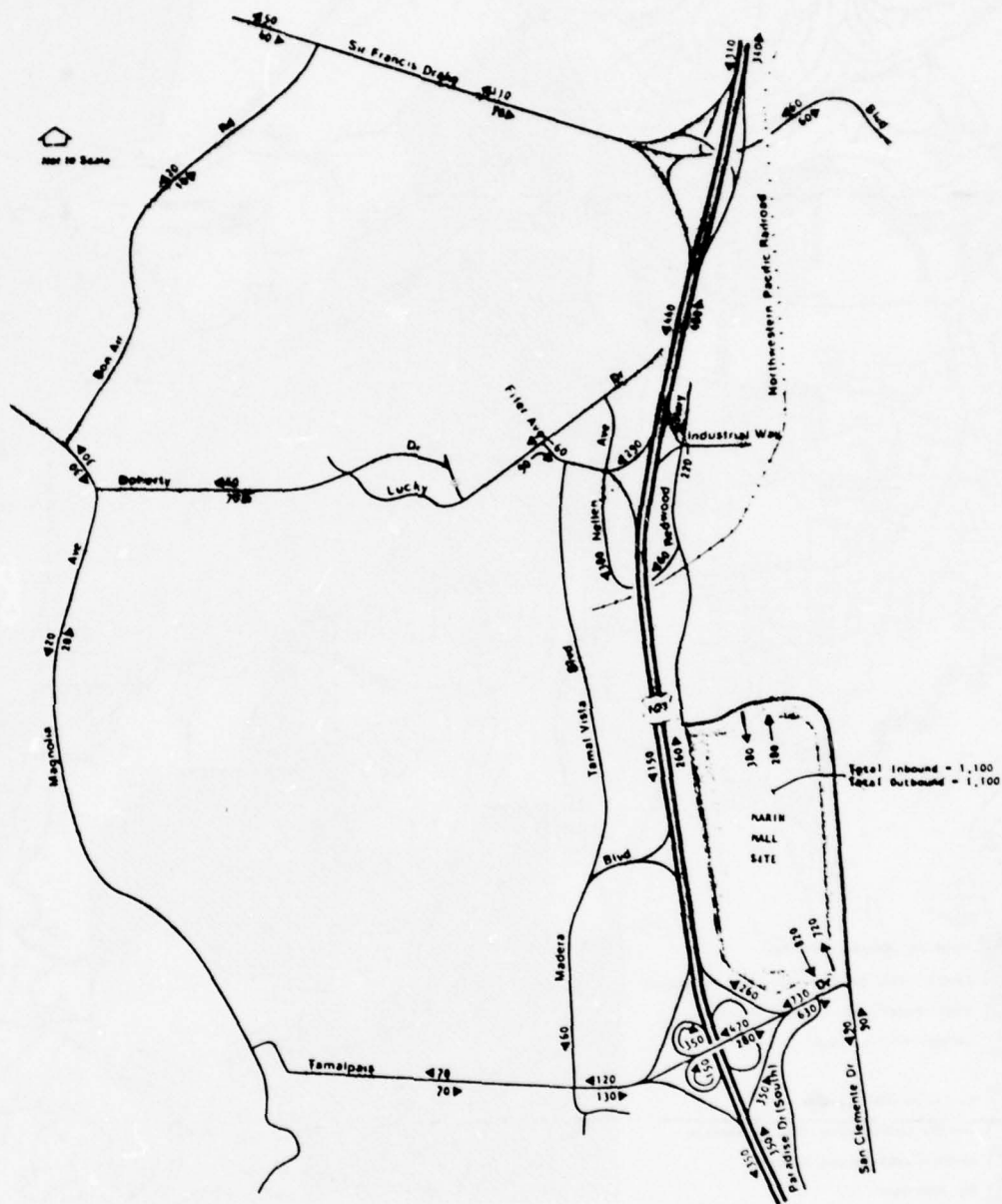
ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
MARIN MALL	
REGIONAL SHOPPING CENTER	
1985: WITH AND WITHOUT	
MARIN MALL TRAFFIC VOLUMES	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C OF E	
TO ACCOMPANY REPORT	FILE NO.
DATED	



Source: De Leuw, Cather & Company

ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
MARIN MALL	
REGIONAL SHOPPING CENTER	
1985: PEAK HOUR DEMAND	
(5-6) WITHOUT MARIN MALL	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C. OF E.	
DRAWN:	FILE NO.
TRACED:	TO ACCOMPANY REPORT
CHECKED:	DATED

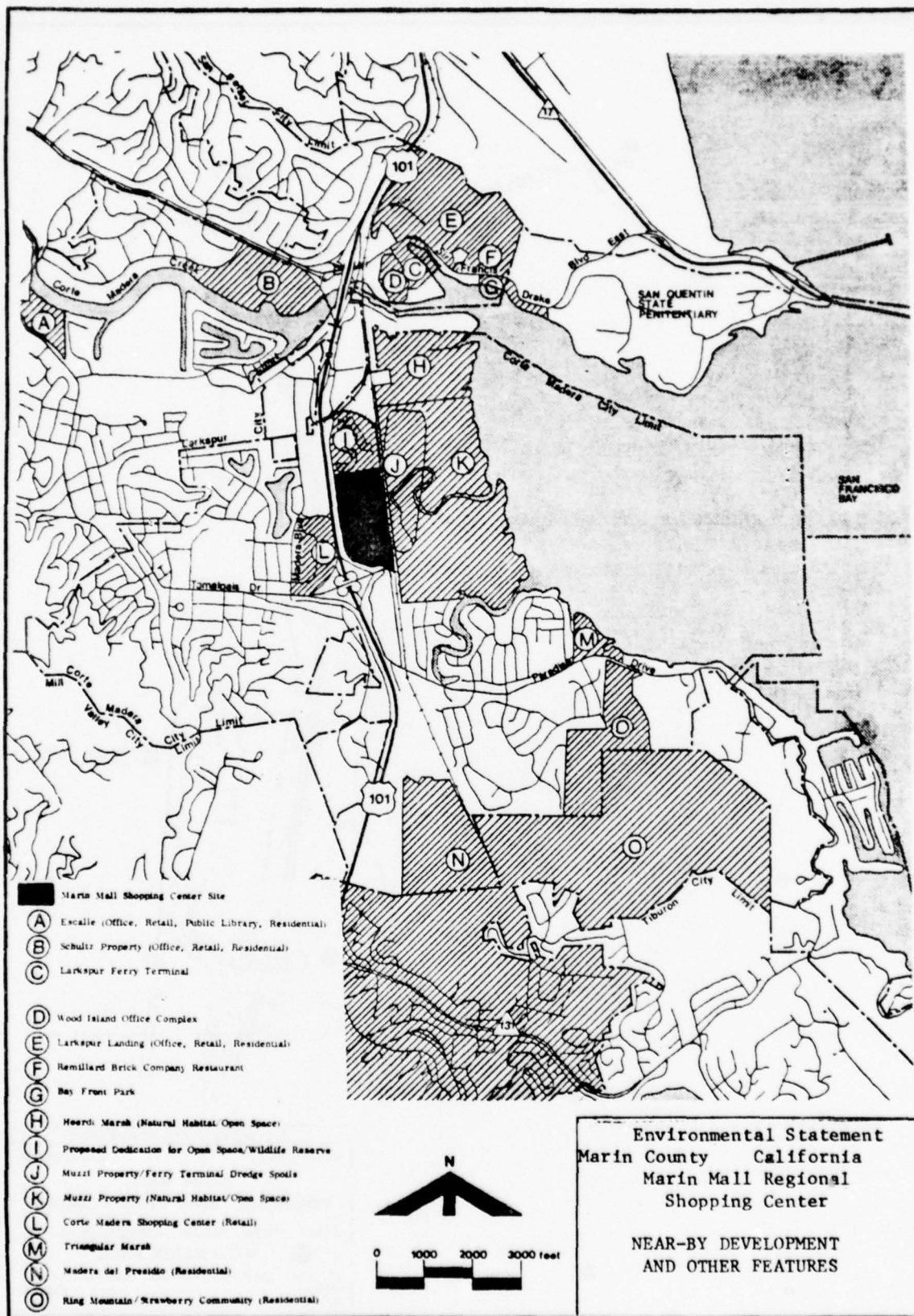
PLATE 17



Note: All traffic volume values have been rounded off to nearest 10 vehicles

Source: De Looze, Gether & Company

ENVIRONMENTAL STATEMENT	
MARIN COUNTY	CALIFORNIA
MARIN MALL	
REGIONAL SHOPPING CENTER	
1985: PEAK HOUR DEMAND (5-6 PM)	
WITH MARIN MALL	
U.S. ARMY ENGINEER DIST., SAN FRANCISCO, C OF E	
DRAWN:	FILE NO.
TRACED:	TO ACCOMPANY REPORT
CHECKED:	DATED



APPENDICES

APPENDIX A

BACKGROUND DOCUMENTS

APPENDIX A

BACKGROUND DOCUMENTS

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Subject: Letter agreement concerning Marin Mall

A-22 Letter from Barrett, Stearns, Collins, Gleason & Kinney to San Francisco District Corps of Engineers
Dated 11 November 1974
Subject: Proposed purchase of a 3-acre triangular site for mitigation.

A-23 San Francisco District Public Notice No. 11101-47 A-45
Dated 21 June 1976
Subject: Announcement that the San Francisco District was reexamining its jurisdiction over the Hahn Shopping Center site

A-24 San Francisco District Public Notice No. 11101-47 A-48
(revised same PN No. dated 21 June 1976)
Dated 9 November 1976
Subject: Announcing the current Marin Mall Regional Shopping Center proposal

A-25 San Francisco District Public Notice announcing A-54
the 27 June 1977 public hearing
Dated 9 May 1977
Subject: Public hearing for the Marin Mall Regional Shopping Center permit application

A-26 Letter from the California Regional Water Quality A-55
Control Board to Ernest W. Hahn, Inc.
Dated 5 December 1977
Subject: Response to request for Certification.

A-27 Letter from Ernest W. Hahn, Inc., to the San Fran- A-59
cisco District, U.S. Army Corps of Engineers
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A-28 Letter from the U.S. Fish and Wildlife Service to A-62
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Subject: Comments on San Francisco District Public Notice No. 11101-47

A-30 Letter from the Marin Municipal Water District A-66
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Dated 11 October 1977
Subject: Water service to the Marin Mall

A-31 Letter from the San Francisco District, Corps of A-68
Engineers to Councilman Larry P. Weingarth of
Corte Madera.
Dated 23 June 1977
Subject: Response to Councilman Weingarth's letter of 10 June 1977(Appendix F, Document F-7)

A-32 Minutes from Town of Corte Madera Planning A-70
Commission meetings(various-1978)
Dated 11 January through 7 February 1978
Subject: Marin Mall project

A-33 Letter from the California State Department of A-75
Transportation to the San Francisco District,
U.S. Army Corps of Engineers
Dated 31 August 1977
Subject: Marin Mall project

EXCERPT FROM MINUTES, COUNCIL MEETING HELD 25 MAY 1972

Certificate of Insurance for PL, PD and BI in the amount of not less than \$500,000-\$1,000,000 with Town named as also insured.

Moved: Councilman Colthurst
Vote: Unanimous

3. Consideration of issuance of Fill Permit for regional shopping center site

The Director of Public Works asked Mr. Carlos Gonzalez, Engineer for the development, to report on engineering aspects of the project and related matters. Mr. Gonzalez estimated that the fill operation would involve approximately 925,000 cubic yards of earth which could not be built upon until sufficiently compacted, and this would take from twelve to eighteen months after completion of the fill operation. The Town Engineer reviewed his memo, 5/22/72, and recommended issuance of the permit subject to conditions contained in his memo.

MOTION: Council approves issuance of a fill permit to Ernest W. Hahn Company for regional shopping center on 83 acre site east of Highway 101, subject to the following conditions:

1. Permit shall be issued pursuant to Chapter 70 of Uniform Building Code and applicable sections of Chapter 15.20 of the Corte Madera Municipal Code, subject to all fees specified therein.
2. All work shall be under the supervision of Soil Engineer, acceptable to Director of Public Works and Building Official, and a final report shall be filed with the Town on completion of grading.
3. The existing drainage channels shall be maintained or a substitute facility shall be constructed at a location approved by the Director of Public Works of the Town.
4. Temporary power line to existing Pump Station shall be maintained until a suitable replacement is in operation. If power line or pump station has to be relocated, it shall be at applicant's expense. Temporary outages of these facilities will be allowed from May 1 to October 1, 1972 on approval of the Director of Public Works.
5. All fill material delivery and return routes shall be subject to approval of the Director of Public Works.
6. Applicant to furnish Town with following Bonds and Sureties:
\$10,000 Corporate Performance Bond to insure maintenance of drainage facilities to completion of Phase I Grading.
\$750 Cash Street Cleaning Deposit.

3). Application for Modification of Grading Permit, Hahn Shopping Center

Memo, 5/11/73, from Gonzalez & Oberkamper and memo, 5/16/73, from Director of Public Works were reviewed. The Town Manager explained that this application for modification of the Grading Permit was to make it conform with the configuration of the shopping center as approved by the Planning Commission and Town Council, and that it would require less than the Grading Plan previously approved.

MOTION: Council approves modification of Grading Permit No. 125 granted May 25, as outlined in letter, 5/11/73 from Gonzalez & Oberkamper.

Moved: Councilman Leney
Ayes: Councilmen Leney, Wagstaff and Mayor Norville
Noes: Councilman Flahive
Absent: Councilman Colthurst

A-2

DOCUMENT A-2

6. Fill Permit for Hahn Shopping Center

The Town Manager said that Mr. Hahn had requested Council approval of modification of the existing fill permit to fit the revised plan for the shopping center, and would like to make a presentation on the request and discuss the present status of the proposed shopping center.

Mr. Hahn said that if the Town approved the fill permit for the shopping center, the approval of only one more agency (the Corps of Engineers) was necessary before actual filling of the site could be undertaken. He anticipated that the Corps of Engineers would act on the application within the next few months. Mr. Hahn estimated the volume of material to fill the site at 500,000 cu. yds. and said it would have to remain in place one year before construction could begin. He said a dry granular fill would be used, and answered questions raised by the Town Council and the audience about various aspects of the project.

Mr. Charles Kanner, Architect, spoke on the design of the center and displayed conceptual drawings showing the store arrangement and type of materials to be used. He envisioned the use of wood, brick and stone on the exterior of the buildings with plentiful landscaping around the perimeter.

Mr. Lee Oberkamper, Civil Engineer, discussed the engineering aspects of the fill operation. After all questions raised by the Town Council and members of the audience were answered, the following motion was made.

MOTION: That the modified fill permit for the Hahn shopping center be approved.

Moved: Councilman Leney
Vote: Ayes: Councilmen Leney, Wagstaff, Colthurst and Mayor Norville
Noes: Councilman Flahive
Absent: None

Councilman Flahive said that Mr. Hahn was a very fine developer, but his "no" vote was because he felt the shopping center would have too much impact on Corte Madera.

A-4

DOCUMENT A-3

4. Review of Fill Permit for Hahn Shopping Center

The Town Manager reviewed background information and noted that the matter under consideration was review of the fill permit for the shopping center which was originally approved by the Council on May 25, 1972, with a modified fill permit for the redesigned shopping center approved on August 20, 1973. Letters, 1/9/74, from Ernest W. Hahn, 1/14/74, from the Town Attorney, 1/14/74, from Vernon W. Humber and, 1/20/74, from Jim and Shirley Walker were read.

Councilman Kostelic questioned the Council's authority to review the fill permit which had been granted in view of the fact that the applicant had fulfilled all municipal code requirements. He noted that there was provision in the code for revocation of a fill permit by the Town Engineer under certain circumstances, but he could find no authority for the Council to revoke a fill permit. The Town Attorney replied that it was his opinion that under Code Section 15.20.090, Council also retained authority, and therefore could review a fill permit. Councilman Kostelic asked if the Town Attorney thought it would be beneficial to research the precise law which enables the Council to take action not spelled out in the code, but which it has the inherent power to exercise. The Town Attorney replied affirmatively and was instructed by the Mayor to conduct the necessary research.

Councilman Flahive said that his intention in placing this matter on the agenda was to allow the area proposed for the shopping center to be considered in the updating of the General Plan to determine the most appropriate usage for that area. He added that with a decision on the Corps of Engineers' fill permit anticipated in August, that this should not delay shopping center progress. Mayor Leney declared the Public Hearing open.

Mr. James Barrett, Attorney for Ernest W. Hahn, Inc., enumerated the reasons for his client's objections to revocation of the fill permit. He said that inducements had been offered to Mr. Hahn to build a high quality shopping center on this property, that a fill permit had been granted which was later amended to comply with all the criteria requested by the Town, County and various State and Federal agencies. He added that in every respect his client had sought to cooperate with the Town and to comply with all requirements, and for the Town to revoke the fill permit at this time would eliminate their chances of getting approval by the Corps of Engineers and would virtually stop construction of the shopping center. He estimated that actual expenses incurred to date by his client at \$2,250,000 and provable damages for loss of income from the shopping center at \$15,000,000, and said that although they would be reluctant to do so, his client would have no alternative to taking legal

action to recover those amounts. Mr. Ernest Hahn reviewed past events relating to negotiations between the Town and his firm, and reiterated the fact that he was attempting to be constructive and cooperative in his dealings with the Town, and that the proposed shopping center would be one of the finest in existence.

Approximately thirty members of the audience expressed their views on the proposed shopping center. Inquiries and allegations were answered by Mr. Hahn. After all representation had been heard, the Public Hearing was declared closed. Council members discussed alternative actions available to them and the desirability of working out a solution that would enable them to consider the zoning of this property in context with the updating of the General Plan, but would not affect Mr. Hahn's chances of securing Corps of Engineers' approval. Councilman Flahive said he wanted it clearly understood that it was not his intent to "cut off" the shopping center, but he wanted the opportunity to consider the most appropriate use for this area during the updating of the General Plan.

MOTION: That fill permit No. 125, heretofore issued by the Town of Corte Madera for the proposed Hahn Shopping Center on May 25, 1972, and thereafter modified on August 20, 1973, be suspended pending adoption of the new Corte Madera General Plan and until further action of the Town Council, not to exceed 30 days after the time when the Corps of Engineers renders its decision on their fill permit for the Hahn project.

Moved: Councilman Flahive
Vote: Ayes: Councilmen Haehl, Shawn, and Flahive
Noes: Kostelic and Mayor Leney
Absent: None

Councilman Kostelic said he thought that the citizens of the Town were entitled to a decision and not a suspension.



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT CORPS OF ENGINEERS
ATTENTION: DISTRICT ENGINEER
SAN FRANCISCO, CALIFORNIA 94102

SPNCO-R
PN 73-24(a)

1 October 1974

Honorable Robert J. Flahive
Mayor of Corte Madera
Town Hall
Corte Madera, California 94925

Dear Mayor Flahive:

Thank you for your letter of 17 September 1974 notifying us of the action of the Town Council at the 16 September 1974 meeting by which the Council expressed its opposition to the current application of Ernest W. Hahn, Inc. for a Corps fill permit. Your letter will be made part of the correspondence accompanying the Environmental Impact Statement.

In light of this new stand by the Council, it is requested that this office also be advised as to what further action the Council intends to take on the Town's fill permit No. 125 issued to Mr. Hahn on 25 May 1972, modified on 20 August 1973 and suspended on 21 January 1974. Should the Council revoke the fill permit, the processing of a Corps fill permit would halt since Corps permits are issued only after the applicant has complied with all local and State regulations and obtained all necessary permits. Conversely, should the suspension on the fill permit be lifted, the applicant would then be in compliance and processing of a Corps permit would continue. Also of importance would be any action the Council has taken or intends to take regarding a building permit, if such is necessary.

Since the Environmental Impact Statement has not yet been sent forward, a copy of your 17 September 1974 letter together with this letter and your response to it will be incorporated as part of the Environmental Impact Statement package. A final

SPNCO-R

Honorable Robert J. Flahive
PN 73-24(a)

1 October 1974

decision on the application for the Corps permit cannot be made until the Final Environmental Impact Statement has been filed with the Council on Environmental Quality in Washington, D. C., and interested agencies have had time to comment during the mandatory 30-day waiting period after such publication. Any permit decision would be made subsequent to evaluation of comments received during the comment period after filing of the Final Environmental Impact Statement.

Sincerely yours,

H. A. FLEBERZHEIM, JR.
Colonel, CE
District Engineer

DOCUMENT A-5

A-7

Keep Freedom in Your Future With U.S. Savings Bonds

CORTE MADERA, CALIFORNIA 94925



MARIN COUNTY, CALIFORNIA

DATE Jan. 30. 74

Jan. 21, 1974

October 22, 1974

Dear Colonel Flettzeim

To reiterate the Town Council's position on the E. Hahn, Inc. project in Corte Madera, we are:

- Attached are the minutes related to the two above actions. The actions remain the official position of the Town Council and no other actions are contemplated on these two positions.

Enclosures

DOCUMENT A-6

Comptroller Kestelie said he thought that the citizens of the Town were entitled to a decision and
A-10 *
and a statement.

Council meeting, September 14, 1974

At the conclusion of additional discussion on the urgency of this decision, which was changed his vote from "yes" to "no" to enable Council to take a position on the fill permit without further delay.

Councilman Shann asked the Town Attorney if the Corps fill permit, and the Town Attorney could be considered as separate items and the Town Attorney replied that in his opinion they could be considered separately, because two different jurisdictions were involved.

The Town Attorney urged Council to take any action on the narrowest possible basis which would accomplish their intent and to limit their motion to the application pending before the Corps, because in the future Council might wish to consider a modified application. He also recommended that the attorneys for Mr. Kahn, who were present in the audience be given an opportunity to be heard if they wished to be heard.

Mr. James Barrett, speaking on behalf of himself and Mr. Stearns as Attorneys for Mr. Kahn, requested that the topic of the meeting be retained until the matter has been completely resolved and requested that the record reflect Councilman Weingarth's statement that he had talked to the Corps of Engineers and had said that if the Town took a position, the Corps would probably deny the permit. He said that he agreed with statements made that there had been too much talk and it was time to take action.

The Mayor asked if there were any other persons wishing to be heard and all persons wishing to speak on this matter were heard.

Councilman Weingarth said he wanted to clarify his conversation with the Corps of Engineers. He said they had informed him that if the Town says "no" to the permit, the Corps will grant the fill permit, but they place great emphasis and great weight on the recommendation of the agency having direct jurisdiction over the area and have indicated that it is very unlikely for them to oppose the recommendation of the local agency, but there was no statement that they would automatically take the same position.

MOTION: Resolved that the Town Council of Corte Madera, based on the expressions of its citizens and on information developed from numerous sources, hereby expresses its opposition to the application of the Ernest W. Kahn, Inc. to the Corps of Engineers for a Corps fill permit as presently submitted.

Moved: Councilman Weingarth
Voted: Ayes: Councilmen Shann, Weingarth, Mahli and Mayor Flahive
Xoes: Councilman Leamy
Absent: None

Mayor Flahive said that the report of the Finance Committee would be discussed in the near future and possibly this would be a public hearing on it.

THIS PAGE NOT USED

A-11

A-12

RESOLUTION NO. R-18
THE USE OF THE REDEVELOPMENT AGENCY OF THE TOWN OF
CORTÉ MADERA

RESOLUTION NO. R-18
THE USE OF THE REDEVELOPMENT AGENCY OF THE TOWN OF CORTÉ MADERA AS

FOLLOWS:

WHEREAS, on February 7, 1972, the Corté Madera Town Council adopted Resolution No. 1346, making various findings of the need to use the Redevelopment Agency/Tax Allocation Bond method of financing to provide offsite improvements for a proposed regional shopping center within the Town of Corté Madera, and

WHEREAS, said resolution directed that the Town Manager proceed with the implementation of a program to carry out the Redevelopment Agency/Tax Allocation Bond proposal consistent with Resolution No. 1346; and

WHEREAS, there has been considerable public concern expressed about the use of the Redevelopment Agency/Tax Allocation method of financing, and WHEREAS, it is desirable that the Redevelopment Agency clarify its policy as to the use of said process.

NOW, THEREFORE, BE IT RESOLVED by the Redevelopment Agency of the Town of Corté Madera that it is its intention to continue the existing Redevelopment Agency only so long as the existing obligation for repayment of funds to Sanitary District No. 2 of Marin County exists and it is

said Agency's intention to abolish said Redevelopment Agency upon repayment of said financial obligation.

BE IT FURTHER RESOLVED that it is the policy of the Corté Madera Redevelopment Agency that said Redevelopment Agency shall not be used for any other purpose than to satisfy the financial obligation to Sanitary District No. 2 of Marin County, and that all activity of the Redevelopment Agency beyond this objective be suspended.

I hereby certify that the foregoing is a true, full and correct copy of a Resolution duly passed and adopted by the Town Council of the Town of Corté Madera, California, at a meeting thereof held on July 15, 1974, by the following vote of the Council thereof:

AYES, and in favor thereof, Councilmen: Mahli, Loney, Shaw, Weinhardt &
VOTES, Councilmen: None
ABSENT, Councilmen: None
APPROVED: *Robert J. Flahive* Mayor
Betty Babel, Town Clerk

TOWN OF CORTE MADERA

TOWN HALL

CORTE MADERA, CALIFORNIA 94925



September 5, 1974

Col. J. L. Lammie
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Lammie:

Please be advised that the Town of Corté Madera's Town Council position toward the proposed Ernest Hahn Shopping Center is NOT that of the previous Town Council favoring the Hahn development.

Due to the number of reports which are incomplete at this writing, the Town Council's position on the Hahn Shopping Center has not been decided upon. The previous Council's action had been favorable toward the proposed Hahn Shopping Center; but be assured that is not the position of the current Town Council.

Upon receipt of the Town Council appointed Committee's Financial Report and completion of the Town's General Plan, the Town Council will take appropriate action. You will be immediately advised of our action.

We are frankly surprised and amazed that the Army Corps of Engineers continues to accept the Town policy of a former Town Council when that policy, in part, resulted in their recall from public office.

Attached are numerous actions related (directly or indirectly) to the proposed Hahn Shopping Center, which have been taken by the current Town Council.

Very truly yours,

Robert J. Flahive
Robert J. Flahive
Mayor

Attachments
RJF:bb
cc: Mr. Ernest Hahn
Town Council
Independent Journal

TOWN OF CORTE MADERA

TOWN HALL

CORTE MADERA, CALIFORNIA 94925



September 17, 1974

Col. H. A. Flietzheim, Jr.
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, Calif. 94102

Dear Col. Flietzheim:

This letter is for the purpose of clarifying the Town Council's position on the proposed fill permit for the Hahn Shopping Center east of Highway 101 in Corte Madera. As you are aware, the Town Council previously deferred taking a position on this fill permit until a report from a Citizens' Finance Committee was received and could be evaluated, and until present hearings on the Corte Madera General Plan were completed.

However, the Council is aware of the extreme urgency to state a position in view of the time schedule for completion of the Environmental Impact Statement by the Corps of Engineers. Accordingly, the Town Council requested that I notify you of their action taken at the regular meeting of September 16, 1974, on the proposed fill permit for the Hahn Shopping Center. The motion adopted at that meeting is as follows:

MOTION: That the Mayor write a letter to the Corps of Engineers indicating that the Town Council of Corte Madera, based on the expressions of its citizens and on information developed from numerous sources, hereby expresses its opposition to the application of the Ernest W. Hahn, Inc. to the Corps of Engineers for a Corps fill permit as presently submitted.

Moved: Councilman Weingarth
Vote: Ayes: Councilmen Shawn, Weingarth, Haehl and Mayor Flahive
Nays: Councilman Laney
Absent: None

This statement should clarify the stated policy of the present Town Council which is opposed to the issuance of a fill permit by the Corps of Engineers for this project.

Very truly yours,

Robert Flahive
Robert Flahive
Mayor

RJF:bb

A-15

DOCUMENT A-9

GONZALEZ & OBERKAMPER
CIVIL ENGINEERS, INC.

March 27, 1973
Job No. 124-73

Environmental Protection Agency
100 California
San Francisco, California 94104

ATTENTION: Mr. Don Thomas

Gentlemen:

This is in response to the concerns expressed by your office with respect to the quality of runoff water from the shopping center area. The revised layout now being considered would leave the northerly portion of the site in an unutilized condition. The drainage from the shopping center area, as well as the upstream area, will drain into this area as it does now, and will be pumped through the railroad embankment and adjacent levee to the existing channel, which is open to the bay. This northerly portion of the site contains about 30 acres and would continue to serve as a peak runoff storage area as it does now.

With respect to quality of waters to be discharged to the bay, the wetlands and adjacent grasslands in the area in question, will continue in the pollutant and sediment trapping function these areas now perform.

If concern remains, with respect to water quality considering the foregoing, it would be possible to add an interim storage and sedimentation basin in the northerly portion of the unutilized area through which the shopping center drainage would pass before entering the remainder of the area. This interim storage and sedimentation basin would contain 3 to 4 acres.

If you need further information or wish to discuss any of the foregoing, we would be happy to meet with you at your convenience.

Very truly yours,

L. E. Clorkamper
Vice President

cc: Mr. Tom Allison
Mr. Allan Leppert

A-16

DOCUMENT A-10

JOHN A. STEARNS
JAMES W. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS
MICHAEL F. COLLINS

LAW OFFICES OF
BARNETT, STEARNS, COLLINS & GLEASON
PROFESSIONAL CORPORATION

1850 UNION SQUARE, SUITE 200
SAN FRANCISCO, CALIFORNIA 94109
TELEPHONE: 434-1234
FAX: 434-1234
AREA: 434-1234
CITY: 434-1234
STATE: 434-1234
ZIP: 434-1234

APR 5 1973
HAYWARD OFFICE

April 2, 1973

Mr. Don Thomas
Environmental Protection Agency
Permit Section
100 California Street
San Francisco, California 94111

Re: Corte Madera (PW 73-24)

Dear Mr. Thomas:

Pursuant to L. E. Oberlander's letter of March 27, 1973 and our telephone conversation of this date concerning the quality of run off water from the proposed shopping center area the Developer agrees as follows:

In the event that the discharge to San Francisco Bay, or tributaries thereto, from the unfilled northerly portion of the site causes a pollution or results in violation of current water quality standards, the Developer agrees to provide an interim storage and sedimentation basin in the southerly portion of the unfilled area through which surface drainage from the shopping center could pass before entering the remainder of the area. Should that interim storage and sedimentation basin fail to correct water quality problems resulting from surface drainage, the Developer agrees to provide threshold treatment of such drainage water, including at least coagulation and, if post-project monitoring indicates a high bacterial count, disinfection.

Sincerely,

THOMAS H. ALLISON

THV/gh

cc: E. R. Schloizer
Mr. Ernest E. Hahn
Mr. Allen J. Spert

A-17

DOCUMENT A-11



DEC 17 1973

RECEIVED
DEC 17 1973
ERNEST W. HAHN, INC.
HAYWARD OFFICE

MARIN COUNTY HISTORICAL SOCIETY
1125 E Street at Mission
San Rafael, California 94901
Inc. 1935

Philip Molteni, Curator
Barbara H. Smith, Asst. Curator

December 15, 1973

Ernest W. Hahn, Inc.
20788 Concord Blvd.
Hayward, California 94545

Gentlemen,

Our organization is not aware of any unaccounted historical resources likely to be affected by your project.

It is the recollection of our board members that there was nothing in the area except duck blinds and marshes.

Sincerely,

Ernest W. Hahn, Inc.

EWH

A-18

DOCUMENT A-12

DEPARTMENT OF PARKS AND RECREATION

PO BOX 2000
SACRAMENTO 95811

November 30, 1973

ERNEST W. HAHN, INC.

22788 CORTELA BLVD. (P.O. BOX 4176) HA VARD, CALIFORNIA 94545 • PHONE (415) 765-8837

Mr. Allan Leppert, Project Coordinator
Ernest W. Hahn, Inc.
20788 Corsair Boulevard
P. O. Box 4176
Hayward, California 94545

Dear Mr. Leppert:

We have received your letter of November 21, 1973 regarding a proposed shopping center in the town of Corte Madera, Marin County.

We have determined that there are no State Historical Landmarks, State Points of Historical Interest, or Sites on the National Register of Historic Places which would be affected by the project.

Although there are no registered historic sites, you should be aware that unrecorded historical values may exist. We would suggest that consideration be given to identifying and safeguarding any potential historical resources which may not be presently recorded on any landmark register. In this regard, you may wish to contact the Marin County Historical Society at 62 Millcrest Drive, San Rafael 94901.

As recorded archaeological sites are in the general vicinity, we suggest that you initiate a preliminary archaeological field investigation prior to any actual site disturbance. For information regarding archaeological survey work, you may contact Mr. Thomas King, Society for California Archaeology, Archaeological Representative, Department of Anthropology, California State College, Sonoma, 1801 East Cotati Avenue, Rohnert Park, California 94923.

Please feel free to contact us if we may be of any further assistance.

Sincerely,

Russell W. Porter

Russell W. Porter, Chief
Grants and Statewide Studies Division

WHP:HT
J-3/3

A-19

DOCUMENT A-13

December 11, 1973

Mr. Thomas King
Society for California Archaeology
Archeological Representative
Department of Anthropology
California State College, Sonoma
1801 East Cotati Avenue
Rohnert Park, California 94928

Dear Mr. King:

Our Company is developing a shopping center on 45.2 acres at the northeast corner of U.S. Highway 101 at the Tinalpasis Drive overpass in the Town of Corte Madera.

Our shopping center falls within the 446 acres of the Corte Madera Redevelopment Project Area No. 1, illustrated in the enclosed copy of Figure 1 (Unated) as prepared by Sedway/Cooke. Both the shopping center and the Redevelopment Agency's Project were subjects of an Environmental Impact Report prepared by the firm of Sedway/Cooke of San Francisco. The E.I.R. was approved and accepted by both the Planning Commission and Town Council of Corte Madera.

Since our shopping center also falls within the jurisdiction of the U.S. Army Corps of Engineers, a Federal Environmental Impact Statement must also be prepared. The District Engineer has requested that we contact the State Liaison Officer and the Advisory Council in compliance with the National Historical Preservation Act of 1956. The State Liaison Officer, through the Department of Parks and Recreation, has determined that there are no registered historic sites which would be affected by the Project (see enclosed letter dated November 30, 1973). The Department, however, has suggested we contact you for information regarding archaeological sites that would be affected by the Project. I would appreciate your help in advising me on this matter at your earliest convenience.

Sincerely,

ERNEST W. HAHN, INC.

Allan Leppert

Allan Leppert
Project Coordinator
Development Division

AL/dr

A-20

DOCUMENT A-14

2311 W. EL SEGUNDO BLVD. (P.O. BOX 807) HAWTHORNE, CALIF. 90250 • PHONE (213) 757-8101

**SOCIETY FOR CALIFORNIA
ARCHAEOLOGY. Environmental
Policy Committee**



Allan Leppert, Project Coordinator
Development Division
Ernest W. Fann, Inc.
20768 Corsair Blvd
P.O. Box 4176
Hayward, CA 94545

Dear Mr. Leppert:

Thank you for your letter of December 11 concerning your shopping center project in Corte Madera. I have checked the project location against our base maps and find no previously recorded archaeological sites, but the area has not been systematically surveyed. I'm unable to determine from the maps whether the project is to be constructed entirely on artificial fill; if the project site is entirely composed of artificially filled tidal lands, then of course the possibility of its containing significant archaeological resources would be essentially nil. If on the other hand the project site touches on any portion of the natural Bay-marsh shoreline, the likelihood of important archaeological resources is very high. Without making a field check of the project site I can't be more specific. If the project isn't going to be constructed entirely on artificial fill, a field survey by a qualified archaeologist will be necessary in order to ascertain potential impacts. I'd suggest that the most expeditious way for you to obtain such a study would be to contact Mr. Thomas Jackson, an archaeologist with the A.S. Prehensile Anthropology Museum at San Francisco State University, who lives in Mill Valley and specializes in Marin County archaeology and impact evaluation. Mr. Jackson lives at 20 Evergreen, Mill Valley, and his home phone is 352-3173. I think he's the eloquent, most qualified person you could get to look at the property and evaluate its archaeological potential.

If I can be of further assistance to you, please let me know.

Sincerely yours,

Thomas F. King
Thomas F. King

Committee Chairman: Mr. Thomas F. King 830 Dexter St. Santa Rosa California 95404

A-21

DOCUMENT A-15

March 11, 1974

Mr. Thomas Jackson
20 Evergreen
Mill Valley, California

Dear Mr. Jackson:

Our Company is developing a shopping center on 45.2 acres at the northeast corner of U.S. Highway 101 at the Timalpais Drive overpass in the Town of Corte Madera. The shopping center site represents a portion of a 74.6 acre parcel which was physically isolated from San Francisco Bay by dikes placed in conjunction with the Northwestern Pacific Railroad tracks prior to 1900. Seventeen acres of the site have been filled and we are proposing to fill an additional 28 acres of the parcel which is not subject to tidal action.

Our shopping center falls within the 446 acres of the Corte Madera Redevelopment Project Area No. 1, illustrated in the enclosed copy of Figures 1 and 4 (undated) as prepared by Sedway/Cooke. Both the shopping center and the Redevelopment Agency's Project were subjects of an Environmental Impact Report prepared by the firm of Sedway/Cooke of San Francisco. The E.I.R. was approved and accepted by both the Planning Commission and Town Council of Corte Madera.

Since our shopping center also falls within the jurisdiction of the U.S. Army Corps of Engineers, a Federal Draft Environmental Impact Statement has been prepared. At the request of the District Engineer, we have contacted the State Liaison Officer and the Advisory Council in compliance with the National Historical Preservation Act of 1966. The State Liaison Officer, (Mr. Russell W. Porter), through the Department of Parks and Recreation has determined that there are no registered historic sites which would be affected by our Project. This information was contained in the Draft E.I.S. prepared by the Corps.

Mr. Porter also suggested that we contact Mr. Thomas King of the Society for California Archaeology for information regarding archeological sites that would be affected by the Project. Mr. King has advised us that he has checked the Project location against his base maps and found no previously recorded archeological sites. Mr. King has further suggested that we may also contact you regarding any archeological potential or field survey information that may be available.

A-22

DOCUMENT A-16

Mr. Thomas Jackson

Page 2

March 11, 1974

I would appreciate any information you may have in order that I can forward it onto the Corps of Engineers for inclusion in their Final Environmental Impact Statement. Thank you for your assistance in this matter.

Sincerely,

ERNEST W. HAHN, INC.

Allan Leppert
Project Coordinator
Development Division

AL/dr

Allan Leppert, Project Coordinator
Development Division
Ernest W. Hahn, Inc.
P.O. Box 4176
Hayward, CA 94545

March 26, 1974

Dear Mr. Leppert:

In response to your letter of March 11 to Mr. Jackson, our firm is pleased to note your interest in complying with the Federal and State Guidelines for Environmental Impact Evaluation. All to often development firms are unwilling to recognize the necessity of considering cultural resources in their Environmental Impact Reports on proposed projects.

Regarding your company's specific project, proposed shopping center in Corte Madera, our firm has made both a research check and field reconnaissance of the 45.2 acre location. The research check indicates that this location in historic times, ie 1850's, was marsh land, part of the rich and extensive marsh and slough system of Corte Madera Creek. (Nichols and Wright 1971) The aboriginal inhabitants of this central portion of Eastern Marin County would certainly have utilized the abundant resources available from the general area. While a valuable resource, it seems unlikely based upon observation of archaeological site location in Eastern Marin, that the aboriginal inhabitants utilized this area for habitation purposes.

A field reconnaissance confirms no natural landforms that might have served as "fast" land during the periodic tidal fluctuations in this marsh area. The area, now diked off from this action, appears uniformly flat and subject to inundation, consequently uncondusive to human habitation in aboriginal times.

While it seems unlikely that archaeological resources are contained within the proposed project location it must be cautioned that such resources might be uncovered during construction. In the event of such an occurrence it is our recommendation that all construction activities within 30 meters be halted and a professional archaeologist be retained

A-23

A-24

DOCUMENT A-17

Exhibit C-

Mr. Leppert

Page 2

March 26, 1974



UNITED STATES
DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY

PACIFIC SOUTHWEST REGION
BOX 36088 • 450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102
(415) 556-6200

June 5, 1973

Colonel James L. Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Lammie:

Sincerely,
ARCHAEOLOGICAL CONSULTING
AND RESEARCH SERVICES

Steven Wilson
Steven Wilson
Principal

Reference:
Nichols, Donald R. and Wright, Nancy A.
Preliminary Map of Historic Margins
of Marshland, San Francisco Bay,
California, US Department of the Interior
Geological Survey Basic Data Contribution
#9, 1971

to identify the discovery and evaluate the situation. It would then be his responsibility to suggest any necessary mitigation measures.

Please accept this report of the archaeological element of the proposed shopping center location with our compliments. The individuals of our firm have extensive background in archaeological research and reconnaissance and are able to provide professional service in both planning proposals and compilation of Environmental Impact Reports (Statements).

We would be pleased to meet with you at your convenience to discuss any services our firm might be able to offer to aid in conformance with both Federal and State Guidelines or to answer any of your questions.

This responds to your Public Notices numbered 73-24, 73-24(a) and 73-92, all relating to the application of Ernest W. Hahn, Inc. for a permit to place fill on former tidelands of San Francisco Bay for the purpose of constructing a shopping center at Corte Madera, California. The area to be filled is 69 acres; it includes 29 acres presently below mean higher high water with 24 acres of this being unfilled previously and containing areas of grass and marsh plants, salt marsh, and degenerated salt marsh. An adjacent area of 32 acres, containing sloughs and associated features of high wildlife value, is to be deeded to the Town of Corte Madera by the applicant with restrictive covenants to limit its use to "open space, drainage and recreational purposes only." The original application, since revised, proposed filling of this area.

Representatives of this Department and the Bureau of Sport Fisheries and Wildlife and the Bureau of Outdoor Recreation have met with the applicants and representatives of the Town of Corte Madera on several occasions since the original public notice was issued on September 15, 1972. The results of those meetings were submitted to you in the letter of December 4, 1972, from Mr. Webster Otis, as Secretary's Field Representative, Department of the Interior. The two earlier memorandum reports of the Regional Director, Bureau of Sport Fisheries and Wildlife were enclosed. No comments have been submitted by the Bureau of Outdoor Recreation. This additional letter is necessary to reflect the changes that have been made in the


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DOCUMENT A-18

Colonel James L. Lammie
Page 3
June 5, 1973

and wildlife values and their intentions to assist in further enhancing these values.

Sincerely,

William T. Davoren
Permit Review Officer

Enclosure

cc: Assistant Secretary for Fish and Wildlife and Parks, USDI
Attn: Mr. George Gardner
Assistant Secretary for Program Development and Budget, USDI
Attn: Director, Environmental Project Review
Regional Director, BSF&W, Portland
Field Supervisor, BSF&W, RBS, Sacramento
Regional Director, BOR, San Francisco
Regional Director, NPS, San Francisco
Regional Administrator, EPA, San Francisco
Regional Director, NMFS, Terminal Island
Fisheries Biologist, NMFS, Tiburon
Attn: Mr. William Leet
Director, California State Department of Fish and Game, Sacramento
Secretary for Resources, State of California, Sacramento
E. W. Hahn, Inc., Hayward, California (applicant)
Mr. Tom Allison, E. W. Hahn, Inc., Hayward (attorney)
Mr. Ronald Bartels, Town Manager, Corte Madera
Executive Director, BDC, San Francisco
Sedway and Cooke, Attn: Mr. Paul Sedway
Mr. Harold Gregg, Marin Conservation League
Mrs. Marta Sullivan, Corte Madera Open Space Committee
Director, Department of Parks and Recreation, County of Marin, San Rafael, California

A-28

Colonel James L. Lammie
Page 2
June 5, 1973

project and this Department's response to the project as revised.

The Department of the Interior and the Bureau of Sport Fisheries and Wildlife do not oppose issuance of the permit requested, as revised, if the applicant agrees to the following conditions:

1. Relocation of the roadway adjacent to the mitigation area so that it is located not closer than 100 feet to the southernmost pond. As an alternative to relocation of the roadway, the applicant may acquire and develop, for fish and wildlife purposes the triangular-shaped area immediately north of the 32-acre mitigation area.
2. Installation of water treatment facilities adequate to insure that the quality of surface drainage water entering the mitigation area from the shopping center does not fall below its present level.
3. Implementation of a habitat management program on the 32-acre mitigation area. The management program is to be developed in cooperation with the California Department of Fish and Game and the Bureau of Sport Fisheries and Wildlife.

To clarify Condition No. 1, it would be acceptable if the Town of Corte Madera or the Redevelopment Agency agrees to "acquire and develop for fish and wildlife purposes" the adjacent area referred to rather than this being required of the applicant only.

For detailed comments please refer to the enclosed memorandum report of the Regional Director, Bureau of Sport Fisheries and Wildlife, dated June 4, 1973.

In closing we would like to commend the interest of the applicant, and the Town of Corte Madera, in making modifications to the project which preserve existing fish

A-27

BUREAU OF SPORT FISHERIES AND WILDLIFE		FAX 004	
Special Assistant to the Secretary, Pacific		DATE 6/4/73	TIME 9:00 a.m.
TO: Southwest Region, USDI, San Francisco, CA		Deliver on regular mail run	
FROM: Regional Director, USFWS, Portland, OR		Call to have picked up	
SUBJECT: Public Notice No. 73-92, dated May 4, 1972 - San Francisco District, Groups of Engineers			

This public notice concerns a request to permanently place 330,000 cubic yards of imported fill on 69 1/2 acres of former San Francisco Bay marshlands and tidalands and to temporarily place 300,000 to 400,000 cubic yards of imported fill as surcharge on the same land. Twenty-nine acres of the project area are below MHHW. The filled property would become the site for a regional shopping center. The proposal is a revision of that which was described in Public Notices 73-24 and 73-24b. The applicant would provide a 32-acre wildlife-park area to mitigate for the loss of fish and wildlife habitat resulting from project construction.

We commented on Public Notice 73-24 in our memorandum reports of October 17, 1971, and November 14, 1972. Subsequent to those reports, the project design (including the mitigation proposal) has been substantially altered and an Environmental Impact Report has been prepared by Sedney and Coole, entitled "Environmental Impact Report - Corte Madera Redevelopment Project Area No. 1 Redevelopment Plan."

We find the biological portion of the environmental impact report generally adequate. However, alternate uses of the site were not sufficiently discussed. Regarding the biological aspect of the report, we wish to make reference to Figure 6, page 30, and Table 6, pages 35-37. The report indicates that portions of Tracts 54, 78, and all of 1F, which are low-value wildlife habitat areas, would be lost with the project. Significant portions of Tracts 6C and 6D, which are rated medium-value wildlife habitat, would also be included in the proposed project. About 80 percent of Tract 1C and about 12 percent of Tract 7A, both of which are rated as medium-high-value wildlife habitat, would be destroyed. The project also would destroy about 20 percent of Tract 1B and all of Tract 1E, each of which are rated high-value wildlife habitat. It must be recognized that these habitat ratings are not static. The values of these lands to wildlife and outdoor recreationists can be expected to increase as plant succession progresses and a nontidal marsh community is established.

The important natural values of marshlands and tidalands have been identified by researchers and published by the San Francisco Bay Conservation and Development Commission and other interests. Our previous memorandum reports cited specific resource uses and values of the area. A letter of December 7, 1972, from the College of Marin to the Corps of Engineers provides additional information on the subject.

The shopping center, which is just across Highway 101 from another shopping center, is being planned as part of a redevelopment project, as defined by California statutes. To us, the term "redevelopment" requires a special interpretation in this case since the shopping center would be located in an area not previously developed. Construction of the shopping center would unquestionably

Position of the Department of the Interior and the Bureau of Sport Fisheries and Wildlife do not object to issuance of the permit if:

1. The roadway adjacent to the 32-acre mitigation area is located not closer than 100 feet to the southernmost pond or if, as an alternative, the triangular area of approximately four acres north of the mitigation area is also acquired and developed for fish and wildlife purposes.
2. Measures are taken to insure maintenance of the present quality of surface drainage water entering the mitigation area from the shopping center area;
3. A habitat management program satisfactory to the Bureau of Sport Fisheries and Wildlife and the State of California Department of Fish and Game is developed for the 32-acre mitigation area.

June 5, 1973

destroy marshlands, open spaces, and associated values. Although modified to a degree, the project area still retains significant natural resources and associated values. However, according to Mr. Bartels, Corte Madera Town Manager, the area can be termed blighted under the California statute.

Beyond the immediate destruction of wildlife habitat that would be occasioned by the project, there is another concern of importance to this Bureau. That concern centers around the question of whether undeveloped former tidelands should be used for any purpose that is not compatible with preservation of their existing natural values and with ultimate restoration of their historic connection to the tidal waters of San Francisco Bay. During recent months, the Bureau's policy position with respect to former tidelands has evolved to the point where we would oppose the subject project were it being considered now for the first time. Despite our grave concerns, we will not interpose any substantial objection to the project at this time for the following reasons:

- (1) The Bureau previously approved a version of the applicants plan that would have been more damaging to fish and wildlife than that which is now proposed;
- (2) The applicant has been responsive to the concerns of conservation interests and has substantially modified his proposal to minimize habitat destruction;
- (3) Much of the project, as now proposed, will be constructed on former tidelands that have been filled above the level of high tide for many years, and
- (4) To mitigate the loss of habitat that will result despite substantial plan modification, the applicant will deed 32 acres of high-value habitat to the Town of Corte Madera with a restrictive covenant to insure preservation of its present natural values.

Concerning the project which is now proposed, we believe that three matters require attention: (1) the proximity of the perimeter road to the southernmost of the two ponds in the 32-acre mitigation area, (2) the quality of drainage water that will flow from the shopping center parking area into the mitigation area, and (3) the potential for habitat improvement in the mitigation area.

We believe that the planned location of the roadway adjacent to the mitigation area would cause disturbance due to automobile traffic that would be sufficient to greatly reduce the present level of bird use. The alignment of the roadway should be altered so that traffic passes no closer than 100 feet to the southernmost pond. As an alternative to realignment of the roadway, the applicant could acquire and develop for fish and wildlife purposes the triangular-shaped area immediately north of the mitigation area. The triangular area is identified as Tract 2A in Figure 6 of the environmental impact report.

The level of petrochemical contaminants in the drainage water entering the mitigation area will be augmented following construction and use of the shopping center parking area. It will be necessary to install water treatment facilities adequate to insure that the quality of surface drainage water entering the mitigation area does not fall below its present level.

There appears to be a potential for raising the wildlife carrying capacity of the mitigation area through the application of habitat management techniques. This potential should be explored and a suitable program developed and implemented. The habitat management program should be developed in cooperation with this Bureau and the California Department of Fish and Game. Cost of implementing the program should be borne by the applicant.

In conclusion, the Bureau of Sport Fisheries and Wildlife will not oppose the issuance of a Department of the Army permit for the project described in Public Notice No. 73-92 if the applicant agrees to the following conditions:

1. Relocation of the roadway adjacent to the mitigation area so that it is located not closer than 100 feet to the southernmost pond. As an alternative to relocation of the roadway, the applicant may acquire and develop for fish and wildlife purposes the triangular-shaped area immediately north of the 32-acre mitigation area.
2. Installation of water treatment facilities adequate to insure that the quality of surface drainage water entering the mitigation area from the shopping center does not fall below its present level.
3. Implementation of a habitat management program on the 32-acre mitigation area. The management program is to be developed in cooperation with the California Department of Fish and Game and the Bureau of Sport Fisheries and Wildlife.

Handwritten signature

Attachment



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
300 South Ferry Street
Terminal Island, CA 90731

APR 23 1973

EXH. b. T H

Colonel J. L. Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California

Dear Colonel Lammie:

We have reviewed the following permits and do not object to their issuance:

73-24(a) ✓ 73-89

73-87 73-90

Sincerely,

Hayd L. P. [Signature]
Gerard V. Howard
Regional Director

cc: William S. Leet, NMFS, Tiburon, CA
William T. Davoren, DOI, San Francisco, CA
George McCammon, CF&G, ESB, Sacto., CA
Felix E. Smith, BSF&M, DRSS, Sacto., CA

N. O. L.

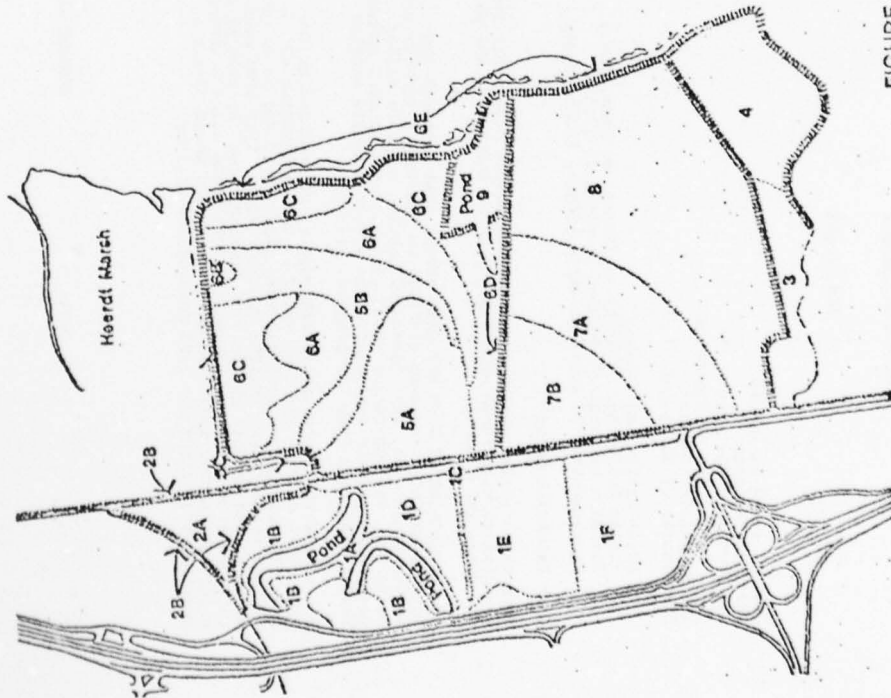


FIGURE 6



1A Hoorde Marsh

A-33

A Century of Fish Conservation

A-34

DOCUMENT A-19

NORMAN B. LUTHERMORE, JR.
SECRETARY

RONALD ELAUGH
GOVERNOR OF
CALIFORNIA

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
58814



Exhibit I

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

JUN - 4 1973

Colonel James L. Lammie
Public Notice No. 73-24(a)
Page 2

Colonel James L. Lammie
District Engineer
San Francisco District
U. S. Army Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

State Review and Comment
Public Notice No. 73-24(a) -- (Ernest W. Hahn, Inc.)
Revision of original request to place fill on
approximately 75 acres in Corte Madera, Marin County

Dear Colonel Lammie:

This is to advise you that the subject public notice has been
coordinated with state agencies, as shown below, for the purpose
of review and comment.

The Department of Fish and Game states that although the
development plan has been modified to preserve a sizable portion
of the Hahn marsh, some marshland habitat would be filled.
Therefore, the Department recommends that the project sponsor
provide acceptable compensation to offset wildlife habitat
losses resulting from the proposed project.

One acceptable compensation alternative recommended by the
Department of Fish and Game would be the acquisition of the
approximately 3-acre triangle area adjacent to and north of
the Old Northwestern Pacific Railroad spur. This area could
be connected to the "Habitat and Drainage Area" by cutting the
railroad spur levee on both ends. This would allow unrestricted
water circulation into both marsh areas and would create a
semisolated island for bird nesting and loafing.

In addition, the Department of Fish and Game recommends a
buffer zone be established between the designated parking
lot and "Habitat Area" to protect wildlife values in the
marsh. Planting trees and shrubs between these two areas
would screen off the project site from the wildlife area,
resulting in greater security for sensitive wildlife species.

The Department of Fish and Game further states that it ex-
pressed its Department's concern about the project area in
the October 31, 1972, letter to the Corps commenting on
Public Notice No. 73-24. The Department also stated its
concern about the project's impact on wildlife habitat in
an April 12, 1973, letter to Gonzalez and Oberkammer,
Civil Engineers. In that letter, the Department commended
the project sponsor for protecting the high value wildlife
area. However, it also added that much of the area to be
filled now provides the habitat for several unique wildlife
species, and that new habitat should be developed to mitigate
for the loss of the old habitat.

If the project sponsor should wish to discuss acceptable
compensation alternatives with the Department of Fish and Game,
he should contact Mr. Frank Goodson, Environmental Services
Supervisor, Department of Fish and Game, P. O. Box 47,
Yountville, CA 94599. His phone number is (707) 944-2443.

We do not have any comments to offer on the subject permit
from the other reviewing agencies.

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DOCUMENT A-20

A-36

Memorandum

To : The Honorable William R. Gianelli
Director, Department of Water Resources
1416 Ninth Street
Sacramento, California 95814

Date: May 25, 1973

From : Department of Fish and Game

Subject: U. S. Army Corps of Engineers Public Notice No. 73-24A, Revised Development Plan, Corte Madera, Marin County

Colonel James L. Lammie
Public Notice No. 73-24(a)
Page 3

Assuming that the foregoing requirements will be met, the State of California has no objection to your issuance of the requested permit.

Sincerely yours,

N. B. LIVERMORE, JR.
Secretary for Resources
ORIGINAL SIGNED BY
PAUL L. CLAYTON

By

cc: Department of Navigation and
Ocean Development
Department of Parks and Recreation
State Water Resources Control Board
Department of Fish and Game
Wildlife Conservation Board
Department of Water Resources
Department of Public Health
Department of Conservation
Division of Highways
Division of Bay Toll Crossings
State Lands Division
San Francisco Bay Conservation
and Development Commission
Mr. Norman Chapp
South Pacific Division, USCE
Applicant - Ernest W. Hahn, Inc.

Department of Fish and Game personnel have reviewed the subject revision, and although the development plan has been modified to preserve a sizable portion of the Hahn marsh, some marshland habitat would be filled.

Therefore, we recommend the project sponsor provide acceptable compensation to offset wildlife habitat losses resulting from the project. One acceptable compensation alternative would be the acquisition of the approximately 3-acre triangle area adjacent to and north of the old Northwestern Pacific Railroad spur. This area could be connected to the "Habitat and Drainage Area" by cutting the railroad spur levee on both ends. This would allow unrestricted water circulation into both marsh areas and would create a semi-isolated island for bird nesting and loafing.

In addition, we also recommend a buffer zone be established between the designated parking lot and "Habitat Area" to protect wildlife values in the marsh. Planting trees and shrubs between these two areas would screen off the project site from the wildlife area resulting in greater security for sensitive wildlife species.

The Resources Agency stated the Department's concern about the project area in its October 31, 1972 letter to Colonel James Lammie, District Engineer, San Francisco District, Corps of Engineers, commenting on Public Notice No. 73-24. We also stated our concern about the project's impact on wildlife habitat in an April 12, 1973 letter to Mr. L. E. Oberkammer, Vice President, Gonzalez and Oberkammer, Civil Engineers. In that letter we recommended the sponsor for protecting the high value wildlife area. However, we added that much of the area to be filled provides the habitat for several unique wildlife species and new habitat should be developed to mitigate for this loss.

Personnel from the Department will be available to discuss acceptable compensation alternatives with the project sponsor. He should contact Mr. Frank Goodson, Environmental Services Supervisor, Department of Fish and Game, P. O. Box 47, Yountville, California, 94599. His phone number is (707) 944-2443.

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Director

A-38

EC Freeman

J. L. L. L. L. L.
RICHARD W. L. L. L.
MICHAEL E. L. L. L.
JAMES E. L. L. L.
ROBERT E. L. L. L.
MICHAEL E. L. L. L.
MICHAEL E. L. L. L.
MICHAEL E. L. L. L.
MICHAEL E. L. L. L.
MICHAEL E. L. L. L.

1000 W. 10TH
HAYWARD, CALIF. 94541
TEL AND FINANCIAL CENTER
2155 HAYWARD BOULEVARD
TERRANCE, CALIFORNIA 94593
AREA CODE 415
370-3581
778-4347

AIR MAIL - CERTIFIED
RETURN RECEIPT REQUESTED
September 10, 1973

Mr. Arnold M. Baptiste, Chairman
Board of Supervisors
County of Marin
Civic Center
San Rafael, California

Re: Letter Agreement concerning Marin Mall -
A proposed shopping center in Corte Madera

Dear Mr. Chairman:

Ernest W. Hahn, Inc., Applicant for a land fill permit under U. S. Army Corps of Engineers P.N.s 73-24, 73-24(a) and 73-92, in response to conditions set forth by the Marin County Board of Supervisors in which, at its regularly scheduled meeting of September 4, 1973, said Board of Supervisors withdrew its objections of June 5, 1973 to the land fill application, hereby agrees as follows:

- 1) The proposed site will be reduced from approximately 70 acres to 45.2 acres.
- 2) The gross leaseable area will be reduced from 1,060,537 square feet to 930,600 square feet.
- 3) Thirty-two (32) acres, located immediately north of the reduced site, containing two ponds, will be deeded to the Town of Corte Madera. Subject Deed shall contain a restrictive covenant that the use permitted in the aforementioned thirty-two (32) acres is to be limited to open space, drainage, and recreational purposes only.
- 4) The amount of fill to be placed upon the site will be reduced from approximately one million (1,000,000) cubic yards to approximately five hundred thousand (500,000) cubic yards.

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DOCUMENT 21

5) The entire Project, including parking, will be located west of the Northwestern Pacific Railroad's right-of-way.

6) The Northwestern Pacific Railroad's right-of-way, which is approximately 150 feet in width, will be reserved for the extension of San Clemente Drive immediately adjacent to and east of the Project. The remaining width of the Northwestern right-of-way will be reserved in the event rapid transit use by the Golden Gate Bridge District occurs.

7) The number of parking spaces will be reduced from 5,650 to 4,647.

8) The parking deck, situated to face San Francisco Bay, will be screened from the view of travelers along the perimeter road through the use of extensive landscaping.

9) The new plan will permit access to open space through the San Clemente Drive extension and bicycle paths.

10) Storm water runoff from Corte Madera through the Site and from the Project will receive adequate treatment, if necessary, to avoid violation of water quality standards.

11) The Project will not cause a violation of any applicable water quality standards for receiving waters under the Federal Water Pollution Control Act.

12) Landscaped earth berms will screen trash, service, and merchandise delivery areas.

13) The number of Tire, Battery, and Accessory stores will be reduced from 3 to 2.

14) The design of the major elements of the Mall building will utilize a basic palette of natural materials such as brick and wood. Landscaping will be in overall architectural harmony with the Department Stores.

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Mr. Arnold G. Bartels
San Francisco, 10, 1973
1000 Tower

Agreed to this 10th day of September 1973.

Ernest W. Hahn, Inc.
Applicant

By *Thomas H. Allison*
THOMAS H. ALLISON

Counsel for Applicant

cc: Mr. Allan Leppert
Mr. Ronald Bartels

LAW OFFICES OF
BARRETT STEARNS COLLINS GLEASON & KINNEY
A PROFESSIONAL CORPORATION

JAMES L. BARRETT
MICHAEL E. STEARNS
MICHAEL E. GLEASON
JAMES H. KINNEY
ROBERT A. COLLINS
WILLIAM W. HILL
THOMAS H. ALLISON
L. ODE LANDFORD
DAVID W. CONNELL
CRAIG W. EDELMAN

1850 UNION BANK TOWER
SUITE 2000
2115 HAMPDEN BOULEVARD
TORRANCE, CALIFORNIA 90503
AREA CODE 310
310 350
772-4247

November 11, 1974

Mr. Thomas Crews
Department of the Army
San Francisco District Corps of Engineers
100 McAllister
San Francisco, California 94102

RE: ERNEST W. HAHN, INC. - CORTE MADERA FILL PERMIT

Dear Mr. Crews:

In response to your request for information regarding the proposed purchase of a 3-acre triangular site to mitigate environmental impact, I am attaching a copy of a Memorandum from the Town Manager of Corte Madera to the Mayor, Councilmen and County Supervisors regarding the Corte Madera redevelopment project.

In this Memorandum, the Town Manager, Mr. Ron Bartels, stated that, "... a representative of Ernest W. Hahn, Inc. entered for the record the developer's willingness to purchase the 3-acre triangle of land for dedication of open space. Since that was the one reservation or condition submitted by the Resources Agency, that condition has now been met."

In discussion with Ernest W. Hahn, Inc. regarding the willingness to purchase the 3-acre triangle and as evidenced by the attached Memorandum from Mr. Ron Bartels, it is clear that Ernest W. Hahn, Inc. is willing to purchase the 3-acre triangle of land for dedication as open space if it becomes necessary.

Mr. Thomas Crews
November 11, 1974
Page Two

If I can be of any further assistance regarding the Ernest W. Hann, Inc. - Corte Madera Fill Permit, please do not hesitate to contact me.

Very truly yours,

HAL A. YOUNG, JR.

HAY:pl

Attachment

cc: Richard B. Collins, Esq.

JUN 18 1973

MEMORANDUM

TO: MAYOR AND COUNCILMEN
COUNTY SUPERVISORS

DATE: JUNE 14, 1973

FROM: TOM MANAGER

RE: CORTE MADERA REDEVELOPMENT PROJECT

At the Board of Supervisors' meeting last Tuesday, the Supervisors' Committee, consisting of Mr. Vornum and Mr. Giacomini, agreed to meet with representatives of the Town to actually walk over the area proposed for filling. It was agreed that this walk would be held on Saturday, June 16th and that those interested would meet at Corte Madera Town Hall at 11 a.m.

For background information I am attaching a copy of the General Plan revision which is presently in effect, which shows the area proposed for region serving commercial use, which is essentially the same as the proposed shopping center area. It also indicates the areas designated for special use such as natural habitat, park and limited commercial compatible with natural resource conditions. Also enclosed is a map from the Environmental Impact Report showing those areas with high natural habitat value and those with little or no habitat value. A comparison of the two maps will indicate that the revised shape of the proposed regional shopping center utilizes the areas of little or no habitat value. For further information, a copy of the notice and map distributed by the U. S. Army Corps of Engineers is enclosed to better define the area in question.

A listing of the federal and state agencies which have either indicated no objection to the fill, or no interest in the project is attached. It should be noted that the conditional no objection filed by the Resources Agency was replied to at the Corps of Engineers hearing held on June 12. In that hearing a representative of Ernest W. Hann, Inc. entered for the record the developers willingness to purchase the three acre triangle of land for dedication as open space. Since that was the one reservation or condition submitted by the Resources Agency, that condition has now been met.

For further information, copies of our Mayor's two letters to the County Planning Department indicating our desire to complete our own General Plan and then discuss it with the County Planning Department are enclosed. The final document is a copy of the minutes from the meeting of our General Plan Study Committee on November 14 in which Mr. von Gundell made a presentation of the proposed Countywide General Plan. He was specifically asked whether there was any conflict between our proposed Redevelopment Plan and the proposed County General Plan, and as the minutes indicate, he told our citizen group that there was no conflict.

Because the subject to be discussed Saturday is the environmental impact, we have asked Mr. Tom Cooke of GRI planning consulting firm to be present to be able to answer any technical questions on the Environmental Impact Report.

RED:mc
Encs.

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A-44

Ronald E. Bartels
Ronald E. Bartels



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
100 McALLISTER STREET
SAN FRANCISCO, CALIFORNIA 94102

SPNCO-R

REPLY TO
ATTENTION OF

PUBLIC NOTICE NO. 11101-47

21 June 1976

TO WHOM IT MAY CONCERN:

1. In response to comments from members of the public, the Office of the Chief of Engineers requested its San Francisco District to reexamine the Hahn Shopping Center site to determine whether a Department of the Army permit is required under Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA) to fill approximately 28 acres of marshland now behind a dike at this site. The site is located in the San Francisco Bay area in the Town of Corte Madera, California. The original purpose was described in our public notices 73-24(a) and 73-92 dated 13 April 1973 and 4 May 1973, respectively. As a result of this reexamination, we concluded that approximately 10.8 acres of the proposed Hahn Shopping Center site are waters of the United States as that term has been defined by the Corps of Engineers in an interim final regulation published 25 July 1975, and accordingly, fall within the requirements of Section 404 of the FWPCA. The following led to this decision.

2. The Hahn Shopping Center site is divided into roughly three parts; the southern-most portion consists of filled land above the elevation of mean higher high water (MHHW) and, while it is scheduled for construction, lies out of Corps of Engineers jurisdiction. There is no aquatic vegetation present. A middle portion, which is also scheduled for construction of the shopping center, consists of land below the elevation of MHHW and contains areas of wetland vegetation. Most of the northern portion contains both old slough ponds and aquatic vegetation areas.

3. Based upon regulations in force in April 1975, the Corps determined that the area in question was not within its regulatory jurisdiction. The applicant and the Town of Corte Madera were informed of this finding by letters dated 7 May 1975.

4. On 27 March 1975, the District Court of the District of Columbia ordered the Corps of Engineers to extend its jurisdiction under Section 404 of the FWPCA to all waters of the United States. An interim final regulation of the Corps' regulatory procedures for permits for activities in navigable waters was published in the Federal Register on 25 July 1975 and was made effective that date pending the publication of a final regulation. Included in these revisions was a definition of the term "navigable waters" as used in Section 404 of the FWPCA that extended Corps

SPNCO-R

PUBLIC NOTICE NO. 11101-47

21 June 1976

jurisdiction to all coastal waters and coastal wetlands, mudflats, swamps and similar areas that are contiguous or adjacent to other coastal waters. "Coastal wetlands", as defined in this regulation, "...includes marshes and shallows and means those areas periodically inundated by saline or brackish waters and that are normally characterized by the prevalence of salt or brackish water vegetation capable of growth and reproduction..."

5. Following publication of this revised definition, interested members of the public brought to the attention of the Corps of Engineers that the above-mentioned revision of applicable regulations introduced additional factors for consideration in the Corps' determination of its jurisdiction over this site and in particular over the middle portion of that site, which, unlike the southern-most portion, is not dry throughout the year because of being filled.

6. The Corps, based on its revised regulations, reexamined all factors involved in its jurisdiction decision with respect to the above-described site. The middle portion and 3.7 acres of the northern portion were reexamined using remote sensing color and infrared transparencies in conjunction with onsite field analysis and plant sampling. Plant communities as they appear on the transparencies were traced to a map and then field comparisons made using a San Francisco District developed list of wetland plants. Of the approximately 21.7 acres surveyed, about 4.4 acres were determined to be wetlands containing the plants brass buttons, salt grass, alkali bulrush, pickleweed or cattails in varying quantities. Another approximately 6.4 acres are characterized as a transitional area containing such plants as fat hen, curly dock, and annual grass. The remaining area is non-wetland. Wetland areas are sustained by accumulations of rain water during the rainy season and possible seepage of salt water into the area all year-round. Pumps are employed all year-round to remove the water but periodic inundation, nonetheless, occurs during the winter months. Based upon this reevaluation, the Corps has determined that 10.8 acres of the Hahn property are periodically inundated by the accumulation of rainwater that combines with the salt content of the soil to form brackish water, and that the periodic presence of this brackish water is able to sustain certain forms of aquatic vegetation. Accordingly, this area constitutes a coastal wetland adjacent to coastal waters, as described in the Corps regulation, and a Department of the Army permit under Section 404 of the FWPCA is required for the proposed fill.

7. After the completion of this reexamination of the Hahn site to determine whether jurisdiction existed under Section 404 of the FWPCA, the United States District Court for the Northern District of California issued a decision on Corps jurisdiction behind dikes in the San Francisco



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT CORPS OF ENGINEERS
211 MAIN STREET
SAN FRANCISCO, CALIFORNIA 94105

SPNCO-R
PUBLIC NOTICE NO. 11101-47
21 June 1976

Bay area under the Rivers and Harbors Act of 1899. On 11 March 1976, that Court ruled that diked areas "which lie within the former line of MHHM in its unobstructed, natural state" are still within the jurisdiction of that Act. This situation exists at portions of the Hahn Site.

8. Since the Department of the Army had previously indicated its intent to follow the judicial guidance of this decision in determining the extent of its jurisdiction over these diked areas under the 1899 Act, a Department of the Army permit will also be required under Section 10 of that Act for the proposed fill.

H. A. FLERTZHEIM, JR.
Colonel, CE
District Engineer

SPNCO-RN

9 November 1976
RESPONSE REQUIRED BY 9 December 1976
PUBLIC NOTICE NO. 11101-47 (Revises Public Notice dated 21 June 1976)

TO WHOM IT MAY CONCERN:

1. Ernest W. Hahn, Inc., 2311 West El Segundo Boulevard, Hawthorne, California 90230 (telephone (213) 757-9151) has applied for a Department of the Army permit to construct drainage improvements and to place fill for a shopping center on approximately 45 acres (including 25 acres within Corps jurisdiction) between U.S. Highway 101 and the Northwestern Pacific Railroad on San Francisco Bay (North) in Corte Madera, Marin County, California. The location of the area and details of the fill are shown on the three drawings which accompany this notice.
2. The purpose of the fill is to provide a base for a regional shopping center having 670,000 square feet of building floor area. An application for a 930,600 square-foot shopping center has been considered previously, as described in our Public Notices 73-24 and 73-24(a) dated 15 September 1972 and 13 April 1973. Approximately 500,000 cubic yards of fill will be placed on 25 acres below the elevation of mean higher high water (MHHW) and on adjacent property (20 acres) to the south not within Corps jurisdiction. The filling would occur in two phases. In Phase I a central portion of the project area will be filled and compacted (230,000 cubic yards) to an elevation of 8.8 feet above mean lower low water (MLLW). The fill material would be trucked from upland sources and compacted. A surcharge of 270,000 cubic yards will then be placed on this fill and allowed to remain approximately one year to provide further compaction. In Phase II the surcharge will be removed and spread over the remainder of the area to be filled. The final elevation of the entire area is expected to be about 7.5 feet above MLLW. Any portion of the surcharge which is unused in the Phase II filling will be disposed of at an upland area away from the site. The portion of the project area lying below the elevation of MHHW is shown as shaded on the attached drawings.

3. The applicant has requested approval of plans from the Town of Corte Madera and certification from the California Regional Water Quality Control Board, San Francisco Bay Region.

4. In accordance with the requirements of the National Environmental Policy Act of 1969 (Public Law 91-190), the Corps of Engineers made an assessment of the environmental, engineering, economic, and social



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A-47

A-48
DOCUMENT A-24

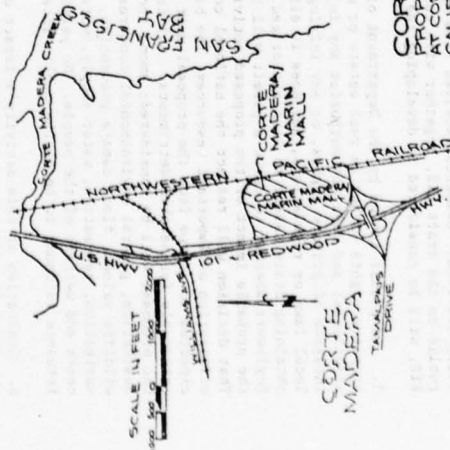
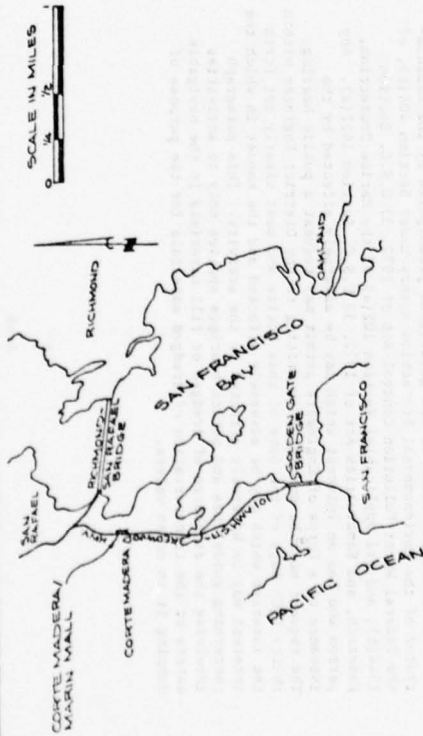
Aspects of the proposed activity, and determined that an Environmental Impact Statement (EIS) was necessary. These aspects were discussed in detail in a draft EIS issued in January 1974. Subsequent to that time, the town of Corte Madera prepared a new Environmental Impact Report. This (EIR) assessing the environmental impacts of the proposed project. This report may be obtained from the town of Corte Madera, California 94025, (415) 924-1700. Comments received from agencies and the concerned public on the draft EIS, together with comments on this Notice and the EIR, will be considered in developing the final EIS.

5. A permit issued by the Department of the Army does not give any property rights either in real estate or materials, or any exclusive privileges; and does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State, or local laws or regulations, nor does it eliminate the necessity of obtaining State assent to work authorized. The decision by the Corps of Engineers whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use classification, navigation, recreation, water supply, water quality and, in general, the needs and welfare of the people. No permit will be granted unless its issuance is found to be in the public interest.

6. Evaluation of this activity's impact on the public interest will also include application of the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b), of the Federal Water Pollution Control Act of 1972, 33 U.S.C. Section 1344(b), and (if applicable) Section 102(a) of the Marine Protection, Research, and Sanctuaries Act of 1972, 33 U.S.C. Section 1412(a). Any person who has an interest which may be adversely affected by the issuance of a Corps of Engineers permit may request a public hearing. The request must be submitted in writing to the District Engineer within thirty (30) days of the date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity. This paragraph concerning guidelines and public hearings applies only to activities involving the discharge of dredged or fill materials in the navigable waters or the transportation of dredged materials for the purpose of dumping it in ocean waters.

7. Interested parties may submit in writing any comments that they may have on the proposed work. Comments should include the number and date of this notice and should be forwarded so as to reach this office within thirty (30) calendar days. It is the Corps' policy to forward any such comments which include objections to the applicant for resolution or rebuttal. If the objecting party so requests, his name will be deleted from the forwarded letter or the objections will be paraphrased in summary form. In such cases, however, it should be noted that the applicant cannot be requested to resolve such objections directly but can only rebut them by responding to the District Engineer. Details on any changes of a minor nature which are made in the final permit action will be provided on request.

H. A. FLERTZHEIM, JR.
Colonel, CE
District Engineer



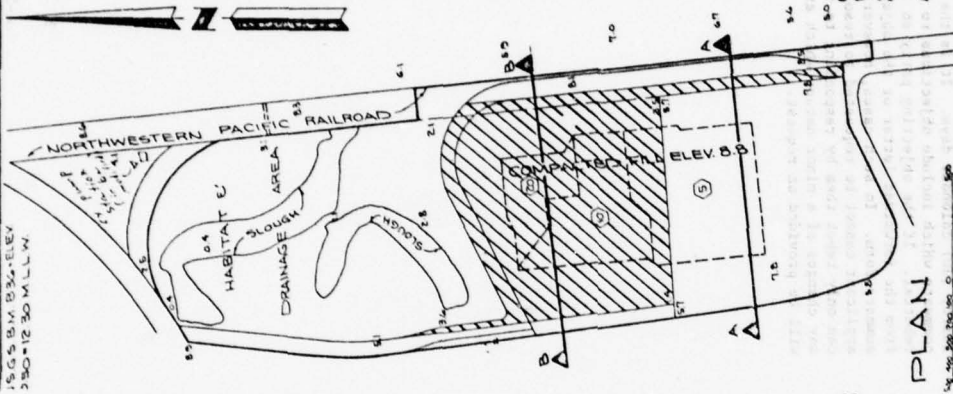
ELEVATIONS ARE ON MLLW DATUM

CORTE MADERA/MARIN MALL
PROPOSED FILL NEAR SAN FRANCISCO BAY
AT CORTE MADERA, COUNTY OF MARIN,
CALIFORNIA

APPLICATION BY: ERNEST W. HAHN, INC.
JULY, 1976

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SHEET 1 OF 3 SHEETS



PLAN

SCALE IN FEET

- NOTES:
1. INDICATES DEPTH OF TEMPORARY SURCHARGE ON COMPACTED FILL. ALL ELEVATIONS ARE BASED ON MLLW DATUM.
 2. INDICATES AREA BELOW THE PLANE OF M.H.W. TO RECEIVE FILL. (OFFICIAL 15' MIN.)
 3. INDICATES OUTLINE OF AREA TO BE SURCHARGED.
 4. THE COMPACTED FILL WILL BE PLACED TO ELEVATION +8.8 BEFORE SURCHARGE IS PLACED.
 5. THE "HABITAT AND DRAINAGE AREA" CONTAINING APPROXIMATELY 30 ACRES WILL BE DEEDED TO THE TOWN OF CORTE MADERA FOR OPEN SPACE, DRAINAGE AND RECREATIONAL PURPOSES.

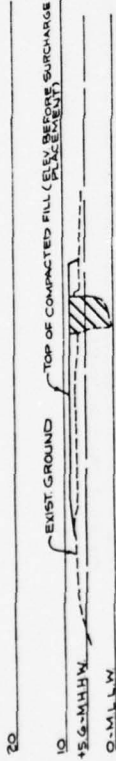
CORTE MADERA/MARIN MALL
PROPOSED FILL NEAR SAN FRANCISCO BAY
AT CORTE MADERA, COUNTY OF MARIN,
CALIFORNIA

APPLICATION BY: ERNEST W. HAHN, INC.
JULY, 1976

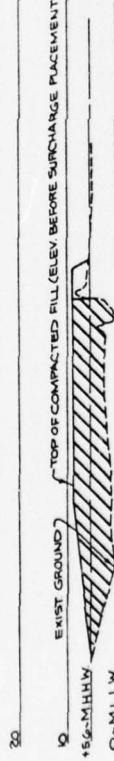
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SHEET 2 OF 3 SHEETS

PN 11101-47



SECTION A-A

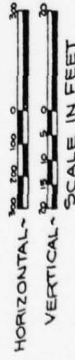


SECTION B-B

final elevation ~ 7.5' MLLW

LEGEND:

INDICATES AREA TO RECEIVE FILL



SCALE IN FEET

CORTE MADERA/MARIN MALL
PROPOSED FILL NEAR SAN FRANCISCO BAY
AT CORTE MADERA, COUNTY OF MARIN,
CALIFORNIA

APPLICATION BY: ERNEST W. HAHN, INC.
JULY, 1976

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SHEET 3 OF 3 SHEETS



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT CORPS OF ENGINEERS
SAN FRANCISCO, CALIFORNIA 94105

9 May 1977

TO WHOM IT MAY CONCERN:

This public notice is to inform all interested parties that the Corps of Engineers will conduct a Public Hearing on the application of Ernest W. Hahn, Inc. (Marin Mall) for a Department of the Army permit to construct and place fill on 25 acres within Corps jurisdiction between US Hwy 101 and the Northwestern Pacific Railroad on San Francisco Bay, Corte Madera, Marin County, California. The hearing is being held under regulation adopted pursuant to Section 10 of the Federal Water Pollution Control Act (PL 92-500, 86 Stat. 916, 33 U.S.C. 1344).

THE HEARING HAS BEEN SCHEDULED FOR 27 June 1977 at 7:30 P.M., Recreation Center, 498 Tamalpais Avenue, Corte Madera, California.

The applicant states that approximately 500,000 cubic yards of fill will be placed on 25 acres below the elevation of mean higher high water (MHHW) which is within the Corps of Engineers jurisdiction and on 20 acres of adjacent property to the south which is not within the Corps of Engineers jurisdiction. The filling will be completed in two phases. In Phase I, a gravel portion of the project area will be filled with 230,000 cubic yards of fill material trucked in from upland sources and compacted to an elevation of 8.8 feet above mean lower low water (MLLW). An additional 270,000 cubic yards of material will be placed on this fill and allowed to remain approximately one year to allow further compaction. In Phase II, the 270,000 cubic yards of material will be removed and spread over the remainder of the area to be filled and any material not used will be disposed of at an upland area away from the site. The final elevation of the entire area is expected to be about 7.5 feet above MLLW. Details of this proposal were described in our Public Notice No. 11101-47, dated 9 November 1976.

The purpose of the fill is to provide a base for a regional shopping center having 670,000 square feet of building floor area. A proposed Environmental Impact Statement has been completed by the Corps of Engineers and is available for review at the Corps Environmental Branch, 211 Main St., S.F. CA (556-8239) and these libraries - Marin County Free Library, Administration Civic Center, San Rafael; Corte Madera Regional Library, 707 Meadowweet Drive, Corte Madera; Marin City Library, Manzanita Center, Marin City; Novato Library, 1720 Novato Blvd., Novato. The Environmental Impact Report prepared by the Town of Corte Madera is available from the Town.

All interested parties are invited and urged to be present or represented at this hearing and will be afforded full opportunity to express their views on the permit application. Oral statements should be supported by factual information insofar as practicable. Oral statements will be heard, but for accuracy of the record, all important facts and statements should be submitted in writing, and handed to the presiding officer at the hearing or may be mailed beforehand to the undersigned at the Corps of Engineers address on the letterhead. Statements so mailed should indicate that they are in response to this announcement. All statements, both oral and written, will become part of the official written record on this permit application and will be made available for public examination. Please bring this announcement to the attention of anyone you know who is interested in this matter.

H. A. FLERTZHEIM, JR.

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DOCUMENT A-25

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION
1111 JACKSON STREET, ROOM 6042
OAKLAND 94607Phone Area Code 415
464-1335

Mr. Jack D. Jensen

-2-

December 5, 1977



provided you conduct your operations in a manner that will insure compliance with the following numbered conditions from the attached list:

December 5, 1977

File Ref: 2150.00(NAR)

Mr. Jack D. Jensen
Assistant Vice President
Ernest W. Hahn, Inc.
200 Continental Boulevard
El Segundo, CA 90245

Dear Mr. Jensen:

Subject: Request for Certification to Construct Drainage Improvements and Place Fill for the Corte Madera/Marin Mall Shopping Center, Corte Madera, Marin County (USCE PN 11101-47)

Your request for water quality certification of subject project, dated November 23, 1977, has been reviewed.

According to the information submitted, you propose to place fill for a shopping center on approximately 45 acres of land, 25 acres of which is within the Corps jurisdiction and is situated between U. S. Highway 101 and the Northwestern Pacific Railroad in the town of Corte Madera, Marin County. The purpose of the fill is to provide a base for a regional shopping center having 670,000 square feet of building floor area.

Approximately 500,000 cubic yards of fill is to be placed on the 25 acre parcel which lies below the elevation of mean higher high water (MHHW) and on the adjacent 20 acres to the south which lies outside of the Corps jurisdiction. The filling is to occur in two phases. In Phase I, the central portion of the total 45 acre project area is to be filled by placing 230,000 cubic yards of material and compacting it to an elevation of 8.8 feet above mean lower low water (MLLW). Thereafter, a surcharge of 270,000 cubic yards is to be placed on this fill and allowed to remain approximately one year to provide further compaction.

In phase II the surcharge is to be removed and spread over the remainder of the 45 acre parcel. The final elevation of the entire area is to be about 7.5 feet above MLLW. Surcharge which is unused during the Phase II filling is to be disposed of at an upland area away from the site.

Based on a review of the proposed project, I have determined that:

- There is reasonable assurance that no waste will be discharged into navigable waters by the proposed activity, and
- Neither the construction nor subsequent operation of the project will cause a violation of applicable provisions of Sections 301, 302, 306 and 307 of Public Law 92-500,

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DOCUMENT A-26

Condition Nos. - 1, 3, 5, 7, 8, 9, 44 and 46

Therefore, Water Quality Certification of subject project will not be required and pursuant to Section 13269 of the Water Code, we are waiving the requirement that you submit a report of waste discharge. A violation of any of the above provisions will constitute cause to require you to cease all work pending further review of possible action by the Regional Board.

Upon our receipt of a signed copy of this letter acknowledging your acceptance of the above conditions, this letter will serve to waive Regional Board objection to issuance of the applicable Federal permit, and be considered a withdrawal of your request for certification pursuant to Section 2343 of Title 23, Chapter 3 of the California Administrative Code.

By copy of this letter, we are informing the Department of Fish and Game, the San Francisco Bay Conservation and Development Commission, the U. S. Army Corps of Engineers, The Environmental Protection Agency, the State Lands Division, the U. S. Fish and Wildlife Service, the National Marine Fisheries Service, and the State Water Resources Control Board of our determination.

If you have any questions, regarding our actions on this project, please call Mr. Norman Rial at (415) 464-0899.

Sincerely,

FRED H. DIERKER
Executive Officer

FHD/gmw

cc: Mr. Mike Rugg, DF&G
Mr. Alan Pendleton, BCDC
Ms. Mary Ann Mark, USCE
Mr. Chris Vais, EPA
Mr. George Ginn, SLD
Mr. Felix Smith, USF&WS
Mr. William Leet, NWS
SWRCB, Legal Division

ACKNOWLEDGEMENT

I hereby accept the conditions cited above and will take all precautions necessary to prevent water quality degradation.

BY

Date

TITLE

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GENERAL CONDITIONS

1. No construction materials shall be discarded into, or allowed to remain in any State water body. All debris shall be disposed of only at an officially classified disposal site authorized to accept the type waste involved, consistent with waste discharge requirements prescribed by the Regional Board.

2. No paint or wood preservative treatment shall be applied over water to the new construction without prior written notification to this Board by the applicant, and subsequent conformance to all required precautions and conditions attendant to our painting authorization.

3. Every precaution must be taken at the project site to minimize any increase in turbidity in State waters during construction.

This is to include the scheduling of work to minimize the duration of any operation within the area of the waterway.

4. The project as proposed does not involve dredging, piling installation or fill construction. These items of work have not been considered in our water quality impact review and our determination that Water Quality Certification is not required does not extend to these activities. A revised request for Water Quality Certification must be submitted if work of this nature is proposed.

5. The Department of Fish and Game must be contacted pursuant to Sections 1601 and 1602 of the Department of Fish and Game Code to determine whether a permit is required. The construction operation must comply with any permit conditions imposed.

6. Every precaution must be taken to prevent fresh portland cement concrete from entering the water during construction in view of the potential adverse impact on the aquatic ecosystem.

7. The use of adequately treated wastewater is encouraged during construction, however, written request must be submitted to the Regional Board for approval. Unless the uses and application are consistent with existing waste discharge requirements adopted by the Regional Board.

Any new proposal to use treated effluent must be evaluated for waste discharge requirements using information submitted which outlines the proposed source, quantity, intended uses and method to be used to prevent escape into State waters.

8. Contract specifications similar to those incorporated in Section 7-1.01L "Water Pollution" of the State of California Department of Transportation Standard Specifications, must be included as part of project specifications.

9. The fill material shall consist of clean, non-decomposable inert solids only.

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CONDITIONS FOR HANDLING OF HAZARDOUS PRODUCTS

40. The subject project facilities shall be constructed and thereafter operated in accordance with the provisions stipulated in the U. S. Coast Guard regulations, "Pollution Prevention, Vessel and Oil Transfer Facilities."

41. An oil spill contingency plan shall be prepared in accordance with Federal regulations in 40 CFR part 112 and 33 CFR 154 and 156, administered by the Environmental Protection Agency and the U. S. Coast Guard.

42. The pipeline specifications shall comply with the American Petroleum Institute and American National Standard Institute codes and the local public Building Code, to include, any and all provisions stipulated by the Fire Marshall's office.

43. All land storage tanks containing petroleum products or other toxic liquids shall be equipped with a suitably sized, properly designed berm to contain the entire tank contents in case of leakage or rupture.

44. The storm drainage system shall be used to discharge clean storm water run-off only. It will not include sanitary sewage, industrial waste drainage from any wash down activity, or drainage from any adjacent industrial process or storage area where chemicals are stored and which may be subject to run-off.

45. Appropriate precautionary measures shall be incorporated as a part of the project design to prevent accidental discharge into State waters during the loading/unloading operation. These measures shall include but not be limited to the installation of check valves and stop valves and the placing of piping within trenches to contain and direct any spillage to a central sump area for recovery. Hoses utilized over water shall be encased in a secondary covering to prevent any spillage in case of hose breakage.

46. The site shall not be used to handle or store petroleum products without authorization from this Regional Board. Should a proposal be made to use the site for this purpose, all stormwater runoff which comes into contact with this storage or handling area will be required to be processed either by an effective oil separator or by some other approved device to prevent any discharge of oil and grease into State waters.

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ERNEST W. HAHN, INC.

200 CONTINENTAL BOULEVARD, EL SEGUNDO, CALIFORNIA 90245 • PHONE (213) 772-4200

Mr. Barney Opton

-2-

December 19, 1977

December 19, 1977

Mr. Barney Opton
Corps. of Engineers
211 Main Street
San Francisco, California

RE: Marin Mall
Corte Madera, California

Dear Barney:

The following information is being submitted to you in response to questions raised by your office regarding the proposed Marin Mall Regional Shopping Center.

1. The Ernest Hahn Company has reviewed and looked into a number of alternative site locations (other than the proposed site in Corte Madera) in the general Corte Madera area for alternate locations for the proposed Marin Mall. The following is a list of those sites reviewed and our opinion of them.

- A. The PG&E property in downtown San Rafael - Southwest quadrant of Sir Francis Drake Boulevard and Highway 101. The problem with this site is two-fold: One, the site is rather small to support even 670,000 square feet of gross leasable area (the size of the proposed Marin Mall) without becoming extensively involved in building a parking structure. The cost of the parking structure would have been too expensive and prohibitive for the project to support it. Second, the location has severe access problems, as it relates to U.S. 101 and adjacent downtown street arterial system.
- B. Larkspur - Sir Francis Drake Boulevard Property - Redevelopment Area Fourth Street downtown San Rafael, two-block area bounded by Fourth, Third, A & B Streets. This property is controlled by another developer. The site already contains a specialty neighborhood-type center on it and the remaining property would not be large enough to support what we are proposing.

- C. Marin City - Southwest quadrant Donahue Street and Highway 101. There were two sites involved in our investigation. One was a ten-acre site, here again, this was too small for our purpose. The other site was forty acres in size, but owned by the Tamaibais High School District, however, they were unwilling to market the property.

- D. Southeast Quadrant Miller Creek Road & Highway 101 - Silveira Ranch Property. This site is somewhat out of the hub or center of the Marin population base for which the higher line department stores, the stores we're dealing with, wanted to be. The site also has limitations as to the visibility, which is a major concern with department stores, who are the bellweather of the industry.

In summary, the proposed Marin Mall site is located in the hub of activity, has excellent freeway visibility and access. The department stores we are dealing with on the Marin Mall site continue to indicate a preference in the Marin site over the other sites we brought to them as possible alternatives. The major department stores have never considered any location north of the Silveira Ranch area as having a viable trade area. The department stores have always indicated to us that the population strength is located in the Corte Madera area.

2. You asked that I send you a drawing which would illustrate the relationship between the existing San Clemente Drive, the North-western Pacific Railroad right-of-way, and the proposed configuration of extension of San Clemente Drive. I have enclosed a drawing depicting the above-described areas for your review.

3. The enclosed letter from Burke Nicolais Archuleta dated November 9, 1977 hopefully will answer the concern raised in the letter sent to you regarding the structural stability of a Mansard Roof system as proposed for the Marin Mall shopping center to resist vertical and horizontal forces caused by an earthquake.

I apologize for the delay in getting this information to you. Should you have any questions regarding the enclosed material or require any additional information, please let me know.

Sincerely,

ERNEST W. HAHN, INC.

Jack Jensen
Jack Jensen
Development Division

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DOCUMENT A-27

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BURKE NICOLAIS ARCHULETA

November 9, 1977

Ernest W. Hahn, Inc.
200 Continental Blvd.
El Segundo, California 90245

Attention: Mr. Jack Jensen

RE: MARIN MALL
CORTE MADERA, CALIFORNIA

JOB NO. 7515

Dear Jack:

The following statement is in response to an expressed concern over our use of the Mansard Roof form on Marin Mall:

"A question has arisen regarding the structural stability of the mansard roof, as proposed for the Marin Mall Shopping Center, to resist vertical and horizontal forces.

The mansard roof, as used in most commercial buildings today, serves a two fold purpose; (1) provide a decorative exterior facade and (2) provide a raised parapet to screen mechanical equipment on the roof.

The basic mansard shape is a structurally stable form which when securely anchored to the supporting roof and walls is capable of resisting any anticipated wind or seismic forces imposed upon it. These forces are in turn transferred to the roof diaphragm and exterior building walls through welded or bolted connections, which are included as part of the overall building design.

There is absolutely no reason for concern over the stability of the mansard roof form if it is properly designed and constructed in accordance with sound engineering principals".

If you have further questions or need additional information, please let me know.

Yours very truly,

BURKE NICOLAIS ARCHULETA

Ernest W. Hahn, Inc.
Project Coordinator

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THE BUREAU OF ARCHITECTURE, 1000 CALIFORNIA STREET, LOS ANGELES, CALIFORNIA 90017 (213) 744-1271



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
2800 Cottage Way, Rm. E-2727
Sacramento, California 95825

December 7, 1976

Colonel H.A. Flertzheim, Jr.
District Engineer
San Francisco District, Corps of Engineers
211 Main Street
San Francisco, California 94105

Re: PN 11107-47 (revision)
San Francisco Bay (North)
Corte Madera, California
Ernest W. Hahn, Inc.

Dear Colonel Flertzheim:

We have reviewed the referenced public notice dated November 9, 1976, concerning an application for a Department of the Army permit to construct drainage improvements and to place fill for a shopping center on approximately 25 acres of modified wetlands in Corte Madera, Marin County, California.

These comments have been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and other authorities mandating Department of the Interior concern for environmental values. They are also consistent with the intent of the National Environmental Policy Act of 1969.

We have previously commented on this project through PN 73-24(a) and PN 73-92 which were issued on April 13 and May 4, 1973, respectively. During the course of this previous review the Department of the Interior indicated that they would not oppose the issuance of the requested permit if the applicant agreed to certain conditions.

The U.S. Fish and Wildlife Service is generally opposed to all projects degrading the existing and restorable natural resource values of present and former tidelands. Only in cases of negligible damage to natural resource value (non-restorable) and in certain projects requiring waterfront locations, do we not object to the issuance of Army Corps of Engineers' permits. In those projects which do cause environmental damage, we recommend that no permit be granted until satisfactory mitigation has



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DOCUMENT A-28

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814

(916) 445-5556

Department of Conservation
Department of Fish and Game
Department of Navigation and
Department of Parks and Recreation

EDMUND G. BROWN, JR.
GOVERNOR OF
CALIFORNIA



THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

A-Resources Branch
California River Board
California State Water Resources Development Commission
Development Commission
State Water Management Board
State Water Resources Control Board
Regional Water Quality Control Board
State Water Resources Control Board
State Water Resources Control Board
State Water Resources Control Board
State Water Resources Control Board

been proposed to compensate for lost resources, uses, and values. In this particular case while some resource values remain on the proposed fill area an opportunity exists to substantially mitigate this loss through the implementation of certain measures.

Therefore, based on this opportunity to satisfactorily mitigate/compensate resource loss, and previous agreements made by this Service and the Department of the Interior we will not object to the work described in the public notice provided the following stipulations are incorporated as conditions of any permit issued.

1. Relocation of the roadway adjacent to the mitigation area so that it is located not closer than 100 feet to the southernmost pond. As an alternative to relocation of the roadway, the triangular-shaped area immediately north of the 30 acre mitigation area may be acquired and developed for fish and wildlife purposes.
2. Installation of water treatment facilities adequate to ensure that the quality of surface drainage water entering the mitigation area from the shopping center does not fall below its present level.
3. Development and implementation of a habitat management program on the 30 acre mitigation site to compensate for the resource loss on the area to be filled. Measures should include such items as restriction of access, development of additional water areas and the maintenance of minimum water levels. Additionally, an easement to restrict the use of the lands to wildlife purposes subject only to the needs of flood control would be incorporated into this management plan.

We request that the issuance of the requested permit be held in abeyance pending the resolution of the above conditions between the applicant and the U.S. Fish and Wildlife Service.

The above views and recommendations constitute the report of the Department of the Interior on the referenced public notice.

Sincerely,

Felix E. Smith

Felix E. Smith
Field Supervisor

cc: ARD-Env., (ES)FWS, Portland, OR
EPA, SF
Reg. Mgr., CDFG, Reg. III, Yountville
Dir., CDFG, Sacramento
CWCGB, Oakland
CWA, Lafayette, CA

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Colonel Henry A. Flertzheim, Jr.
District Engineer
San Francisco District
U. S. Army Corps of Engineers
211 Main Street
San Francisco, CA 94105

State Review and Comment
Public Notice No. 1101-47 (E. W. Hahn, Inc.) Proposed
drainage improvements and placement of fill near San
Francisco Bay at Corte Madera, Marin County

Dear Colonel Flertzheim:

This is to advise you that review of the subject public notice has been coordinated with State agencies, as shown below.

The State of California will not object to permit issuance provided the requirements set forth by the Department of Fish and Game are adhered to by the applicant.

The Department indicates that a conservation easement should be placed on the approximate 30-acre habitat and drainage area (depicted on sheet 2 of 3 in the public notice) that will be deeded to the town of Corte Madera. This easement will insure the protection and use of the area by wildlife in perpetuity. Uses other than those oriented to wildlife purposes should not be permitted.

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Colonel Henry A. Flertzhelm, Jr.
Public Notice No. 11101-47
Page 2

The date that this was to be mailed to you you requested specific comments from the Air Resources Board and the Department of Transportation. We are forwarding these comments now and by copy of this letter to the Air Resources Board and the Department of Transportation we are asking them to comment directly to you with a copy to the Resources Agency.

We do not have any comments to offer on the subject permit from the other reviewing agencies.

Sincerely,

CLAIRE T. DEDRICK
Secretary for Resources

By *Frank Goodson*
Frank Goodson
Assistant to the Secretary
Projects Coordinator

cc: Department of Navigation and
Ocean Development
Department of Parks and Recreation
State Water Resources Control Board
Department of Fish and Game
Wildlife Conservation Board
Department of Water Resources
Department of Conservation
Division of Highways
State Lands Division
Bureau of Sport Fisheries and Wildlife
Mr. Gerald V. Howard
San Francisco Bay Conservation and
Development Commission
Applicant - E. W. Hahn, Inc.
Department of Transportation
Air Resources Board



MARIN MUNICIPAL WATER DISTRICT

October 11, 1977
File 090.3.3

200 Ocean Avenue
Corte Madera, California 94029

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Mr. James Pitt
Environmental Branch
Department of the Army
Corps of Engineers
San Francisco District
211 Main Street
San Francisco, CA 94105

Re: Final Environmental Impact Report -
Hahn Shopping Center, Corte Madera

Dear Jim:

The following information is in response to your telephone request about service to the Hahn Shopping Center.

The California Highway Patrol Office and the Maggiora/Ghilotti building each have a one inch service connection. If both structures were removed, the new project could receive the equivalent of historical consumption, which is 0.86 acre feet annually. Without project plans, we cannot accurately estimate future water consumption. Northgate Shopping Center, which may be comparable, has an annual consumption of 81 acre feet.

The District's net safe yield is 23,000 acre feet. After Soulaule Dam is completed, our net safe yield will be 26,700 acre feet. District consumption and commitments for new services total about 33,400 acre feet annually.

We are currently analyzing new water supply alternatives to relieve the over-commitment and to provide a water supply to meet the projections of the Marin Countywide Plan.

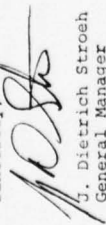
An updated Environmental Fact Sheet is attached for further information. Our Board will require water conserving fixtures, pressure-reducing valves set so that the pressure at the highest fixture in each structure does not exceed 50 pounds per square inch, and may require drought-tolerant landscaping with efficient irrigation systems, and other mitigations.

October 11, 1977
Page 2

Fire flow requirements will be determined by the fire chief. Any use beyond the current 0.86 acre feet annually will increase our storage requirement in this portion of our system, which is already deficient.

We hope this information will be useful to you. If you have any questions or need additional information, please contact Jo Duthie, our Environmental Services Coordinator.

Sincerely,


J. Dietrich Stroeh
General Manager

JD:ho

Enclosure

SPJES/SPHQ-a
No. 11101-47

23 JUN 1977

Councilman Larry P. Weingarth
Town of Corte Madera
Town Hall
Corte Madera, CA 94025

Dear Councilman Weingarth:

I have received your letter of 10 June 1977, concerning the Proposed Final Environmental Statement for the Mohn Shopping Center. The subject document was essentially prepared to provide information for the upcoming 17 June public hearings. The document was not published in the Federal Register and will not be used to meet the National Environmental Policy Act (NEPA) requirements for a final environmental statement (FES). Following the public hearing a FES will be prepared. Your comments concerning the November 1976 election and concerning traffic will then be considered along with other comments received.

In response to your question concerning the relationship of Corps authorization to local permit actions, it is correct that the Department of the Army will not issue a permit if local authorization for a project has been denied. If a local agency has not reached a final decision concerning their authorization for an activity, the Corps can proceed to issue or deny the Department of the Army permit. The Town of Corte Madera on 21 January 1974, suspended its fill permit pending adoption of the new Corte Madera General Plan and for not more than 30 days after the time when the Corps makes its decision on the fill permit. Department of the Army permits are not issued "in lieu of" local authorizations. Furthermore, Corps permits are conditioned as follows:

"That this permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain State or local assent required by law for the activity authorized herein."

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DOCUMENT A-31

SPMLD/SPALCO-2
Councilman Weinberger

I have also received a letter from Mr. Douglas R. Dawson, Town Manager, requesting that an advertisement be placed on the front page of the Independent Journal announcing our upcoming public hearing. I would like to take this opportunity to inform the Town of Corte Madera that such an ad will be placed in this Friday's issue, the 24th of June. It should also be noted that this hearing was re-scheduled from the larger College of Marin Auditorium to the Corte Madera Recreation Center at the Town's request. I am concerned that our wide-spread campaign to notify the general public might result in an overflow attendance at the Recreation Center. Therefore, I have tentatively set aside the 7th of July as a supplemental hearing date if more time and space is needed.

I appreciate your input to our permit review process and assure you that your concerns will be addressed.

Sincerely yours,

H. A. FLINZMEIN, JR.
Colonel, CE
District Engineer

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MINUTES
CORTE MADERA PLANNING COMMISSION

The special meeting of the Corte Madera Planning Commission was called to order by Chairman Holmes at 7:10 p.m., Wednesday, January 11, 1978.

PRESENT: Holmes
Pierce
Dunn*
Thomas

STAFF: Kautz

SELECTION OF CONSULTANT FOR MARIN MALL (HAIN) SHOPPING CENTER

Robert Conradt discussed his experience and approach to the project.

*Commissioner Dunn arrived at 7:25 p.m.

Commissioners asked Mr. Conradt questions about his proposed services and thanked him for his presentation.

Commissioners requested staff to ask Kenneth Bankston of Alan M. Voorhees and Associates to be present at 7:00 o'clock p.m. Monday in the Downstairs Conference Room, Town Hall, to discuss his experience with the Commission. Commissioners indicated that they would select a consultant at that meeting.

WORKSHOP ON MARIN MALL (HAIN) SHOPPING CENTER

Commissioners reviewed staff report discussing the project's conformance with the General Plan and made the following comments:

1. Permanent preservation of the 32 acre marsh. The Commission requested the Town Engineer to calculate the precise area of "Area A" and asked staff to investigate the actual value of the portion of this area which is proposed to be used for parking and roads. Commissioners indicated that they might be receptive to requiring the developer to dedicate the Humber marsh to the Town in exchange for being allowed to fill part of Area A.
2. Limiting development to 45 acres. The Commission noted that the development is located on 50.3 acres because the developer plans to build on the area of a cloverleaf. They stated that they would make a decision on this matter after reviewing the proposed traffic improvements.
3. Low profile structures with creative landscaping reflecting the aesthetic requirements of the site. Commissioners indicated that it is desirable to place higher buildings at the rear of the project, as shown, but that the height should be limited to the 35 feet required by the zoning ordinance. Commissioners indicated that much more landscaping should be provided, and that the landscaping should provide for some visual continuity between the shopping center and the marsh area. The Commission stated it would be willing to consider reducing the number of parking spaces shown, and felt that a parking deck should be constructed east of the structures to reduce the coverage on the site. Finally, the Commissioners felt that the architectural design should be integrated; that the design should break up the mass of the complex; and that the theater should be relocated into the shopping center complex.

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DOCUMENT A-32

4. Long term maintenance bond. The Commission requested that the developer state how he will meet this condition, and requested that the Town Attorney and Town Engineer review the developer's proposal.
5. Drainage structures. The Commissioners requested that the Town Engineer provide a list of measures that should be incorporated into the project to mitigate a list of measures that should be incorporated into the project to mitigate changes to surrounding drainage. They also recommended that the Engineer explore the possibility of requiring an auxiliary power source for the pumps north of the site.
6. Improvement of marsh habitat. The Commission directed staff to ask the Department of Fish and Game how the Hahn Marsh could be improved and how it could be managed as a single entity with the Heerd and Muzzi properties.
7. Provisions for pedestrian and bicycle access. The plan should make some provisions for limited public access to the marsh in line with the BODC public access plan.
8. Northwestern Pacific Railroad right-of-way. Commissioners indicated that the project could utilize 50 feet of the railroad right-of-way for a continuation of San Clemente Drive, but should not use the rest of the right-of-way. Use of the right-of-way would also be contingent on the owner purchasing and dedicating to the Town a one foot non-access strip at the northern end of the Railroad right-of-way.
9. Conformance with small-town character. Community meeting rooms might be one way to mitigate the project's impact on Corte Madera's small-town character. Commissioners indicated that the plan would require considerable review and revision to be compatible with the Town's character.
10. Soils reports. Commissioners indicated that they would be willing to allow some filling of the site after preliminary plan approval and to require monitoring of such fill. Depending on the results of that monitoring, changes might be required in the site plan at the precise plan stage.
11. Flood control. The Commission noted that the finish floor elevation must be +7 NGVD to conform to the Town's flood ordinance.
12. Construction noise. The Commission indicated they felt that the EIR probably overstated the number of trucks which would haul fill to the site. However, the Commission stated that the trucks should be limited to a number which would not create significant noise impacts.

The Commission then discussed the findings on the Environmental Impact Report contained in the staff report. In addition to the suggestions made above, the Commission noted the following:

1. Retail competition. The Commission stated that it did not feel that the impacts of the center on downtown San Rafael were grounds for reducing the size of this shopping center, since the provision of more commercial space would create increased competition and reduce consumer costs.

2. Police and fire services; sanitary sewers; water supply; seismicity; and water quality. Commissioners indicated that the mitigation measures listed in the staff report and EIR should be required.
3. Storm drainage. Jack Jensen, representing the developer, noted that his engineer did not understand the EIR's statement that the project would make it impossible to impound a 24 hour, 50 year storm. Staff was requested to ask the Town Engineer to review this matter with the applicant.
4. Energy. Mr. Jensen indicated that he felt the figures for utilization of energy contained in the EIR were grossly exaggerated and promised to supply revised figures.
5. Vegetation and wildlife. Commissioners indicated that San Clemente Drive should be moved away from the meanders and noted that they might be possibly willing to consider the purchase of the Humber marsh as an alternative mitigation measure. Commissioners stated that they did not feel the construction of uses that could tolerate flooding was a feasible alternative.
6. Air quality. The Commission stated that the addition of two freeway lanes was contrary to the Town's General Plan, and that making traffic flow smoothly near the site would be the best way to preserve air quality in the area.

Commissioners told the applicant that they would be interested in seeing modification to the plans, but felt they should not be completed until the Commission had made decisions about required traffic improvements.

ADJOURNMENT: The meeting adjourned at 10:15 p.m.

MINUTES
CORTE MADERA PLANNING COMMISSION

The special meeting of the Planning Commission was called to order by Chairman Holmes at 7:10 p.m., on Monday, January 16, 1978.

PRESENT: Holmes
Pierce
Dunn
Thompson
Thomas
ABSENT: Thomas
STAFF: Kautz

SELECTION OF CONSULTANT FOR MARIN MALL (HAHN) SHOPPING CENTER

Kenneth Bankston, representing the firm of Alan M. Voorhees and Associates, discussed his experience and ideas for the Temalpais Drive interchange with the Commission. Commissioners thanked Mr. Bankston for his presentation.

Commissioners discussed the four consultants who had made presentations to the Commission. Commissioner Thompson stated that Commissioner Thomas had asked him to report that his first choice was Robert Conradt, while his second choice was Alan M. Voorhees and Associates.

Motion: To retain the firm of Alan M. Voorhees and Associates to provide traffic engineering assistance for the Marin Mall (Hahn) Shopping Center.

Moved: Thompson
Seconded: Dunn
Vote: Thompson, Dunn, Holmes
Pierce
Noes:
Absent: Thomas

Commissioner Pierce indicated that she would prefer Robert Conradt as the consultant.

Commissioners directed staff to include in the contract a provision that at least 75 hours of time should be provided by Kenneth Bankston and that most of the rest of the time should be provided by Jack Peers.

ADJOURNMENT: The special meeting adjourned at 8:15 p.m. to a special joint meeting with the Town Council in the Town Hall Council Chambers.

MINUTES
CORTE MADERA PLANNING COMMISSION

The special meeting of the Planning Commission was called to order at 7:40 p.m., Tuesday, February 7, 1978, by Chairman Holmes.

PRESENT: Holmes
Dunn
Thomas
Thompson
ABSENT: Pierce
STAFF: Kautz

MARIN MALL (HAHN) TRAFFIC IMPACTS

The applicant's representative, Jack Jensen, and his traffic engineer were present. Kenneth Bankston, representing the firm of Alan M. Voorhees and Associates, Inc., presented to the Commission a list of key traffic issues connected with the Hahn Shopping Center which he planned to investigate. These included access to the Hahn Center; possible deficiencies in East-West arterial capacity across US 101; the effect of the proposed Corte Madera Shopping Center expansion; transit use; pedestrian and bike access; fire and other emergency access; and peak shopping periods versus the average shopping day. He suggested that one way to mitigate some of the deficiencies of the plan recommended in the EIR would be to reverse the loops and to retain the northeast and southwest loops rather than the other two.

Commissioners also requested the consultant to investigate other possible intersection configurations and other land use alternatives, to the extent that they significantly reduce the traffic impacts caused by this land use. The consultant was also requested to investigate traffic problems near the Lucky-Nellen off-ramp.

The Commission requested staff to arrange another workshop on traffic problems for Thursday, March 2nd, if possible.*

ADJOURNMENT: The meeting adjourned at 9:40 p.m.

* Please note: That meeting was subsequently scheduled for Wednesday, March 8, at 7:30 p.m. in the Town Hall Council Chambers.



DEPARTMENT OF TRANSPORTATION

P.O. BOX 350 FENICEN AVENUE
SAN FRANCISCO 1415
(415) 552-1840

Col. Adsit
Page 2
August 31, 1977

August 31, 1977

04-Mrn-101

Col. John M. Adsit
Department of the Army
San Francisco District,
Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Col. Adsit:

Thank you for the opportunity for our Engineers to meet with your representatives on August 24, 1977, to discuss our concerns indicated in our June 24, 1977, response to your referral of a Proposed Final Environmental Impact Statement and Notice of Public Hearing for the Main Shopping Center (Marin Mall Regional Shopping Center) in Corte Madera, Marin County, California.

As requested at that meeting this will confirm several points and will serve as an addendum to our June 24, 1977 letter.

In our previous letter, we indicated that a Caltrans report had recommended a Transportation Corridor Study on the Route 101 Corridor from the Golden Gate Bridge to Route 37. The study has now been approved. In our opinion, this action should be noted in the preparation of the final document.

As indicated at the meeting, Caltrans is concerned with the impacts of the development on drainage of the area, especially as it relates to Route 101. These concerns were indicated in our August 9, 1977 letter to the Planning Director, Town of Corte Madera, and are hereby made a part of this letter by attachment. Our basic concern is that the environmental impact of any drainage modification should be addressed in the Statement and that when detail drainage plans are available, Caltrans be given an opportunity to review and comment prior to their being approved.

As indicated at the meeting, in our opinion, the Statement should adequately discuss the secondary impacts of new or modified traffic facilities made necessary by the proposed project. The level of detail provided should be consistent with existing laws and regulations.

Sincerely yours,

T. R. LAMMERS
District Director

By *T. R. Lammers*
B. C. BACHTOLD
Deputy District Director
Attachment

DOCUMENT A-33

A-75

A-76

DEPARTMENT OF TRANSPORTATION

P. O. BOX 3256 BENICIA
SAN FRANCISCO 94119
(415) 557-1840

EUGENE G. BROWN JR. General



Mr. Jerry Heath
Page 2
August 9, 1977

August 9, 1977

04-Mrn-101

Mr. Jerry Heath
Planning Director
Town of Corte Madera
P. O. Box 159
Corte Madera, CA 94925

Dear Mr. Heath:

This is in response to your referral of the proposed Final Environmental Impact Report (FEIR) dated June, 1977 for Marin Mall (Mahn) Shopping Center.

We have reviewed the proposed Final EIR and have the following comments.

General Comments

Caltrans' letter of September 28, 1976, commenting on the Draft Environmental Impact Report, raised several points which were not resolved in the Final EIR.

1. The comment regarding Greenbrae Interchange improvements and movements for purpose of analysis was not included.
2. The comment that the ramp length for the short term improvements at the Fifer Avenue-Mellen Avenue - U.S. 101 Interchange is considered too short for directional turning lanes at the ramp terminus did not get a response. In fact, this proposed short term improvement remains in the report on page IV-5 unchanged. Our opinion has not changed.
3. Our last paragraph requested an opportunity to review and comment on grading and drainage plans. On January 4, 1973, the State Highway Engineer withdrew a request that a Corps of Engineers permit for fill for this project be held in abeyance. The withdrawal was based on assurance from the Town of Corte Madera that highway drainage would be improved as a result of the project. No subsequent documents that we have seen, including this FEIR, reiterate or substantiate such assurance. Grading and drainage plans of sufficient scope and detail for improved highway drainage should be submitted to Caltrans for review and comment.

A-77

There are two highway drainage units involved. One is a 6'x6' box culvert approximately 2000' northerly of Tamalpais Drive, which discharges into a holding basin/pump system northerly of the Shopping Center site. The second system is the culvert at the Tamalpais Drive interchange, which ultimately discharges into the same holding basin via a large, long, flat ditch through the easterly portion of the Shopping Center site. This ditch is to be replaced with a closed conduit, whose capacity, maintenance, or criteria are not discussed.

However, on page III-14, the proposed FLIR states that capacity of the holding basin would be reduced, "making it impossible to impound a 24 hour, 50 year design storm". The effects on the highway or other interests are not identified. In our opinion, this apparent conflict should be discussed in the report.

It should be noted that the holding basin site appears to be the same as the Area A wildlife habitat site to be dedicated to the town. The Department of Fish and Game's memo of 10/4/76 suggests that uses other than those oriented to wildlife purposes should not be permitted. In our opinion, the report should discuss the compatibility of using the basin for "wildlife purposes only" with management of the basin as a flood holding basin.

It is noted, on pages IV-6 and II-2 that the cost of the off-site transportation improvements should be borne by the developer and that the facility is not to be granted an occupancy permit until the traffic projects have been completed to the point necessary to handle the traffic generated by the facility. In our opinion, this should be further clarified as to what is proposed mitigation to be installed by the developer and what is to be constructed and/or financed by others.

Specific Comments

In reviewing this proposed FLIR, we have noted some additional items which, in our opinion, should be mentioned.

A-78

Mr. Jerry Heath
Page 5
August 9, 1977

A Freeway Alternative A is presented on pages V-58 to V-60 with Figure C-2 from the Corte Madera General Plan shown on page V-50. Figure C-2 has numbers at various locations and a note to see text for explanation of numbered improvements. The text in the EIR does not appear to explain the improvements but only discusses the positive and negative aspects of the plan. In our opinion, the figure and/or the text should be revised to complement each other.

The statement on page II-28 that there is a loss of one northbound through freeway lane at the northbound off-ramp to eastbound Tantalus Drive is misleading. The lane dropped at this off-ramp is an auxiliary lane added to four through freeway lanes between the Tiburon Boulevard and Tantalus Drive interchanges. The four through lanes continue through the Tiburon Boulevard interchange.

Starting on page V-25, the proposed EIR discusses various freeway interchange alternatives at Tantalus Drive. In our opinion, the report should include the detailed intersection capacity analyses, including lane volumes, which were used to obtain the intersection capacity indices and service levels.

The two-loop interchange alternative appears to be superior to either the upgraded four-loop or three-loop interchange alternatives, due primarily to the elimination of the existing weaves between adjacent loops. However, there is confusion and inconsistency in the proposed EIR regarding the proposed geometrics for the two-loop alternative. On page V-43, reference is made to a two-loop interchange shown on Figure 17 in Chapter IV. Chapter IV does not have a Figure 17, but does have a Figure 10 on page IV-8 showing a two-loop interchange. However, this interchange is different from the two-loop interchange shown as Figure 3a on page I-8, and described on page I-9. Figure 3a shows free right turns at the end of the off-ramps, whereas Figure 19 does not. Also, the northbound off-ramp on Figure 3a has one left turn lane, whereas Figure 19 shows two left turn lanes.

With only one left turn lane on the northbound off-ramp, as shown on Figure 3a, the ramp/Tantalus Drive intersection would operate at a level where many vehicles would wait more than one signal cycle, based on the 1965 plus Marin Mall traffic shown on page III-20. In our opinion, off-ramp traffic would probably back up into the right freeway lane creating a very undesirable condition. In our opinion, with two left turn lanes, as shown on Figure 19, the intersection would operate at a satisfactory level.

A-79

Mr. Jerry Heath
Page 4
August 9, 1977

If only one left turn lane is provided at the southbound off-ramp/Tantalus Drive intersection, as shown on both Figures 3a and 19, then the intersection would have the congestion problems described above for the northbound off-ramp. In our opinion, the intersection would operate satisfactorily if two left turn lanes and a free right turn are provided.

Reference to Corps Proposed Final EIS

Caltrans' comments, dated June 24, 1977, on the Corps proposed Final Environmental Impact Statement for the Marin Shopping Center are attached for your reference. The Section regarding the potential use of the proposed abandonment of the Northwestern Pacific Railroad is also applicable to this proposed EIR.

Thank you for the opportunity to comment on this proposed EIR. We would also appreciate receiving a copy of the approved Final EIR.

Sincerely yours,

T. R. LANGRISH
District Director

By General Signed By

B. C. BACHTOLD
Deputy District Director

Attachment

cc: Col. H.A. Flettcheim, Jr.,
Department of the Army
San Francisco District, Corps of Engineers

A-80

APPENDIX B

AIR QUALITY

SOURCE: Marin Mall Regional Shopping Center;
Environmental Impact Report

JOSEPH D. COONS
CONSULTING ENGINEER
833 PATRICIA
SAN RAFAEL, CALIFORNIA 94903

21 May 1976

AIR QUALITY ELEMENTS

of the

MARIN MALL ENVIRONMENTAL IMPACT REPORT

Air quality impacts of various development options were estimated on the basis of general procedures recommended by the Bay Area Air Pollution Control District (Ref. 1). A study area of one square kilometer was defined, as shown in Figure 1. Emissions from sources within this area were projected, and the effects of these emissions on contaminant concentrations were estimated, for the following alternatives:

1. Current (1976) activity levels.
2. Projected 1985 activity levels, without the Mall.
3. Projected 1985 activity levels, including the Mall.
4. Alternate 2, modified to reflect addition of two freeway lanes as considered in Reference 3.
5. Alternate 3, with the same modification.

Results are presented in the two following tables, which show, for each of these alternatives, projected concentrations for each of five contaminants, for each of five averaging times. Where applicable, allowable concentrations under appropriate standards are also shown.

The first table shows projected local concentrations within the study area due to emissions within the area. The second shows regional impact of these emissions in terms of increments of concentration anticipated at a downwind distance of ten kilometers, under strongly adverse meteorological conditions.

PROJECTED LOCAL CONCENTRATIONS [Micrograms/cubic meter]

Season- date	ALTERNATE LEVEL				
	1	2	3	4	5
CARBON MONOXIDE					
STD GLOM DIV 2.03					
no std	685	305	533	311	476
40000	23254	13456	18348	11127	18887
10000	7700	4137	6854	3408	6135
no std	3659	2159	3100	1743	2678
no std	9720	5727	8304	4561	5116
ORGANICS					
STD GLOM DIV 2.03					
no std	103	57	74	47	64
no std	3406	1946	2450	1655	2132
no std	1077	503	844	456	753
no std	572	320	418	267	363
160	1547	807	966	741	819
NITROGEN DIOXIDE					
STD GLOM DIV 1.55					
100	6	4	5	5	5
500	73	50	59	56	65
no std	31	21	26	23	25
no std	21	14	17	16	19
no std	45	31	36	34	40
SULFUR DIOXIDE					
STD GLOM DIV 2.03					
no std	6	8	10	6	10
1300	186	244	302	244	302
no std	63	79	113	79	113
100	35	44	57	44	57
no std	91	110	126	116	126
PARTICULATES					
STD GLOM DIV 1.60					
60	14	9	12	9	12
no std	189	137	175	137	175
no std	70	55	82	55	82
100	49	34	46	34	46
no std	105	75	89	75	89

AIR QUALITY IMPACTS

PROJECTED REGIONAL INCREAS [Micrograms/cubic meter]

Standard	ALTERNATE NUMER				
	1	2	3	4	5
CARBON MONOXIDE					
STD GEOM DEV 2.05					
Annual Mean	1.56	0.87	1.25	0.70	1.08
Max 1-hr	20.72	11.59	16.35	9.91	14.15
Max 8-hr	8.96	4.84	7.96	4.04	7.15
Max 24-hr	5.14	2.88	4.14	2.32	3.57
0600-0900	9.57	5.86	6.47	4.68	5.25
ORGANICS					
STD GEOM DEV 2.05					
Annual Mean	0.23	0.13	0.17	0.11	0.14
Max 1-hr	3.04	1.72	2.18	1.47	1.90
Max 8-hr	1.25	0.68	0.93	0.58	0.88
Max 24-hr	0.77	0.43	0.56	0.36	0.48
0600-0900	1.59	0.91	0.99	0.76	0.84
NITROGEN DIOXIDE					
STD GEOM DEV 1.55					
Annual Mean	0.01	0.01	0.01	0.01	0.01
Max 1-hr	0.13	0.11	0.13	0.12	0.14
Max 8-hr	0.07	0.05	0.06	0.05	0.07
Max 24-hr	0.05	0.03	0.04	0.04	0.04
0600-0900	0.16	0.07	0.08	0.08	0.09
SULFUR OXIDES					
STD GEOM DEV 2.05					
Annual Mean	0.01	0.02	0.02	0.02	0.02
Max 1-hr	0.17	0.22	0.27	0.22	0.27
Max 8-hr	0.07	0.09	0.13	0.09	0.13
Max 24-hr	0.05	0.06	0.08	0.06	0.08
0600-0900	0.09	0.11	0.13	0.12	0.13
PARTICULATES					
STD GEOM DEV 1.60					
Annual Mean	0.03	0.03	0.03	0.02	0.03
Max 1-hr	0.57	0.27	0.33	0.27	0.35
Max 8-hr	0.17	0.13	0.17	0.12	0.17
Max 24-hr	0.11	0.07	0.10	0.07	0.10
0600-0900	0.21	0.13	0.13	0.13	0.18

Major Factors

The freeway (U.S. Highway 101) and the Tamalpais Drive interchange are the dominant features of the study area, with regard to air quality, under any of the alternatives. In over half of the 125 combinations of contaminant, alternate and averaging time, emissions from vehicles on the road links (at-speed) were over 85% of the total emissions within the area, the remainder being divided in varying proportions between vehicles at near-idle and fuel combustion at point sources.

This dominance indicated the need to include Alternates 4 and 5, which are unchanged from Alternates 2 and 3, respectively, except for the inclusion of additional lanes on the freeway. The increase in average freeway speed due to these lanes (Ref. 3) leads to substantial reduction in projected levels of carbon monoxide and organics, and detectable differences in nitrogen dioxide levels, for either of these alternatives as compared to its counterpart. These changes are due entirely to the changes in freeway speeds. (Sulfur oxides and particulates, not being speed-related, remain the same as in Alternates 2 and 3.)

Compliance with Standards

Organic compounds are projected to be substantially higher than Federal guideline levels for the 6 A.M. to 9 A.M. period which is most significant to production of oxidants (at some downwind location). This is true for projections of current levels and all future levels.

Vehicles at-speed contribute nearly all of the organic compound emissions within the study area during this three-hour period; the proportion ranges from 93% to 98% for the five alternatives. Only 2% to 7% arise from vehicles

at near-idle and from stationary source fuel combustion. It is significant that, for this contaminant and time period, Alternate 5 (Mall, with additional freeway lanes) leads to lower projected concentrations than Alternate 2 (no Mall, no freeway change); freeway speed is a more significant air quality factor, in this instance, than the Mall.

The projected excesses for organic compounds reflect a situation common throughout the Bay Area, and in most metropolitan areas of the country. The task of achieving the guideline level, and related oxidant standards, is a major factor in regional, State and Federal planning of transportation strategies and vehicular emission controls.

For all other contaminants, projected concentrations are well within standards for all alternates. Levels of particulates may be somewhat higher than shown, since the tabular values do not include any background level, which may be significant for particulates. This background is quite variable; assuming it to be as high as 35 micrograms per cubic meter (Ref. 1), the projected levels would be increased substantially, but would remain within standards.

Roadside Concentrations

Standards are not normally applied at points immediately adjacent to highways and freeways, where people are not expected to spend appreciable periods of time. Some analysis of roadside concentrations for the various alternates was undertaken, however.

Maximum values are projected to occur along the freeway, increasing slightly south of the Tamalpais Drive interchange. Roadside concentrations of carbon monoxide are projected to be less than one-half of applicable standards at present, and less than one-fourth in all future alternates. Since the study area contains no project-impacted sensitive receptors (as defined in Ref. 1), no further analysis of roadside concentrations was undertaken.

Regional Increments

The projected regional increments, on page 3, show no major impact under any alternate. The increments of concentration added to a downwind area, as a result of the total emissions from the study area under any alternate, are generally less than 0.1% of applicable standards, except in the case of organics, which range up to 1%.

These incremental values do not of course specify the total concentrations to be expected in such downwind areas, but only the amounts likely to be contributed toward such downwind concentrations, under strongly adverse meteorological conditions, by emissions from the study area.

METHODOLOGY

The methodology of the study followed very closely the guidelines of the Bay Area Air Pollution Control District (Ref. 1). Emission factors and meteorological parameters were taken primarily from this source, with some additional information from Reference 2. Traffic and trip generation data were taken from Reference 3, and stationary source fuel use was estimated from data in Reference 4.

The basic purpose of the methodology is to develop an estimate of the probable concentration of a given contaminant over a given time period, for comparison to the standard applicable to that contaminant and time period. (In this study, concentration estimates were developed for all time periods for each contaminant, to provide information even for cases to which no standard is applicable.)

The method consists, briefly, in developing an estimate of the mean emission rate of a given contaminant, over a time period, for a given alternate; and applying appropriate diffusion equations, with local values of meteorological parameters, to estimate the resulting mean concentrations over the time period.

Traffic, demographic and other studies which precede an air quality study, and produce its initial data base, are in many instances so constrained by their own methodology and data base that the air quality study must begin with less than the ideal data base. The Guidelines (Ref. 1) recognize this, and permit operation based fundamentally on daily or annual mean activity rates, while recommending that peak values appropriate to the various time periods be used where known.

For this study, some data were available on daily and hourly variations in traffic volumes and trip generation rates. Approximate patterns were developed from these key points; and similar patterns of daily and hourly fuel use in stationary sources, based on the annual usage information of Reference 4, and on generalized information as to usage in commercial buildings in the Bay Area. These patterns were used to estimate peak emission values for each of the time periods, providing substantial improvement in accuracy over the simpler assumption of constant rate for all activities generating emissions.

The emission rates used for each time period thus represent the best estimate of real maxima for the time period; annual and daily mean rate data are restricted, as appropriate, to estimates of annual and daily mean concentration.

Firm data on stationary source fuel use were not available. However, these sources are relatively minor contributors to total emissions within the area, so that a high order of accuracy in estimation of use is not required. The sensitivity of the total study to variations in these usage rates is best evaluated in Alternate 5, where maximum fuel usage, and minimum vehicular emissions, are combined. For this alternate, combustion contaminants do not exceed 1.5% of the total for carbon monoxide or sulfur dioxide emissions for any time period, nor 4% of the total organic emissions.

Natural gas contributions to nitrogen dioxide and particulate emissions are more significant percentages of the total emissions; since local concentrations are projected to be very substantially below standards for both these contaminants, however, the natural gas contributions are quite low in terms of percentage contribution (0.3% to 7%) to the concentration levels permitted by standards. Thus the effect on the projected concentrations due to even a very substantial inaccuracy in fuel use rate estimate would be quite small.

In order to include these combustion contaminants in the total of study-area emissions, annual rates of gas usage were estimated as 40 billion Btu for Alternate 1; 45 billion Btu for Alternates 2 and 4; and 105 billion Btu for Alternates 3 and 5. With these usages, no point source emission rate is projected to approach the minimum level, of ten pounds per hour for any contaminant, which would warrant a separate analysis of point-source impact.

REFERENCES

1. "Guidelines for Air Quality Impact Analysis of Projects", Bay Area Air Pollution Control District, San Francisco, CA, June 1975.
2. "Compilation of Air Pollutant Emission Factors", 2d Ed with Supp. 1-5, EPA/OAP Publication AP-42, Research Triangle Park, NC, Dec 1975.
3. "Transportation Elements for the Environmental Impact Report on Marin Mall", De Leuw, Cather & Co., San Francisco, CA, March 1976 Draft.
4. "Energy Conservation Element, Marin Mall EIR", -----, Apr 1976 Draft.

APPENDIX C

SUMMARY: CIRCULATION AND SCENIC HIGHWAYS ELEMENT
CORTE MADERA GENERAL PLAN (1975)

APPENDIX C

SUMMARY: CIRCULATION ELEMENT
CORTE MADERA GENERAL PLAN (1973)

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SUMMARY OF THE CIRCULATION AND SCENIC HIGHWAYS ELEMENT

1. **Town-Wide Policies.** To insure the development of a circulation system that will best serve the residents of Corte Madera, it should be the policy of the Town:

a. To assure that the design of all new transportation rights-of-way be consistent with the small-town scale and character of Corte Madera and promote the maintenance of the natural appearance of the surrounding hills and ridges.

b. To discourage the use of local roadways by commuters during peak hours.

c. To avoid further increases in vehicular volumes on roadways which are approaching or already have reduced their peak-hour capacity.

d. To provide safe access throughout Corte Madera for motorists, bicyclists and pedestrians by upgrading dangerous interchanges, intersections and roadways, including local and through routes, where consistent with other circulation policies.

e. To minimize the intrusion of vehicular traffic and its associated visual and noise impacts into residential areas.

f. To limit street development within the Town boundaries to an internalized pattern. Access beyond the Town limits is to be confined to the streets, rights-of-way and other transit facilities presently designated for this purpose.

g. To reduce the dependency on the private automobile by promoting local and regional public transit to provide access to jobs and services, as well as to improve air quality.

h. To improve the visual aspects of streets, roads, and bicycle paths by the use of landscaping and trees where appropriate.

2. Specific Circulation Policies.

a. **Freeway Improvement.** Plans of the California Division of Highways to increase U.S. 101 from six to eight lanes from Richardson Bay Bridge to California 37 are recommended as appropriate for the Town, but Corte Madera should strongly oppose any future plans to widen the freeway beyond these eight lanes. These extra lanes are necessary to relieve some of the present congestion, but continued expansion of the freeway will only serve to perpetuate the reliance on the private automobile. While it is generally recognized that the automobile will remain the major transportation mode within the foreseeable future, an increase in traffic congestion and a shortage of economical parking in

major employment centers will force people to use transit. By making it easier to drive through a continual program of freeway widening, the chances of achieving a viable transit system for inter-county and intra-county travel are remote. Furthermore, Marin County cannot afford to devote much more of its land for automobile travel purposes, nor can the county allow an increase in automobile-induced air and noise pollution. Moreover, the energy crisis, with impending increases in gasoline prices and possible shortages, will force more people to rely on public transit, particularly for commuting.

Any major development which would cause significant traffic increases must obtain a commitment for freeway interchange improvement before final approval is granted for the development.

Any and all modifications of the existing improvement within the State Highway right-of-way should be coordinated for conformity with the Town's General Plan.

b. **Local Roadways.** Corte Madera's location in a critical position along U.S. 101 has resulted in the use of many of its local roadways as freeway bypasses. Several of these streets are not adequate for the peak hour overloads that occur. From a review of county planning data, it appears that the streets should be adequate for traffic generated in Corte Madera and Larkspur alone if the diversion of additional loads from other areas in the north could be eliminated or substantially reduced. Providing additional capacity on streets through Corte Madera would not be a solution in any case because it would not relieve congestion on the freeway. Moreover, continual upgrading of local streets to improve capacity for automobile commuters will further delay good transit service in Marin County.

It is concluded, therefore, that in general the policy of Corte Madera should be to keep local streets at their present capacities except where intersection changes may be required for safety and improvement of efficiency consistent with the nature and function of the particular street.

In order to minimize the traffic originating north of Corte Madera and Larkspur from diverting through these two cities, most of the street improvements should be limited to those critical portions of the road system outside of Corte Madera to insure that traffic generated in other areas uses the most appropriate routes to U.S. 101.

Nine other roadway recommendations focus on the present street network and are geared to improve dangerous and confusing intersections, as well as to upgrade or realign some roadways to improve safety and facilitate a smoother flow of traffic. These recommendations are:

(1) As part of the interchange improvements to a modified diamond pattern, the sharp turning movements from Tamalpais Drive to San Clemente Drive should be eliminated. One solution would be to design a "u" intersection at this point which could provide a base for further improvements on San Clemente Drive;

(2) Upgrade San Clemente Drive in conjunction with the preceding recommendation to a landscaped median-divided roadway to improve safety;

(3) Improve traffic operation and safety at the intersection of Tamalpais Drive and Madera Boulevard;

(4) Retain the existing street and intersection configuration at Tamalpais Drive, Redwood Avenue and Corte Madera Avenue. The intersection should not be improved as this would encourage through traffic to bypass Sir Francis Drake Boulevard;

(5) Do not develop William Avenue (the railroad right-of-way) west of Tamal Vista for powered vehicles;

(6) The access road to the area commonly referred to as Madera del Presidio should be along the railroad right-of-way off Paradise Drive, rather than in the location originally proposed;

(7) Good signing and minimal electric signalization should be used to maintain low-profile, small-town traffic circulation systems;

(8) No local streets should be extended or widened to serve any presently undeveloped area over the objections of adjoining or affected property owners including, but not limited to: Sausalito Street to Scott Valley; Endeavor or Westward to the Deffebach property; Corte Madera Avenue to the Northridge; William Avenue to Magnolia; Harbor or Echo Drive to the Muzzi Property;

(9) Alta Way, Chapman Drive and Sausalito Street should not be improved to such an extent that they would be viable alternatives for traffic between Mill Valley and the freeway.

c. Transit. The recommendations for freeway and street improvements in Corte Madera have been based on the assumption that facilitating greater ease in automobile travel will mean a delay in the provision of adequate transit services, and that this delay is not in the best interest of Corte Madera and Marin County residents. This assumption has led to a policy of reducing dependency on the private automobile, particularly for commuting purposes, and improving accessibility to jobs, goods and services for all residents in a manner consistent with the environmental quality aims of this General Plan. Therefore, the Town should encourage plans of other agencies to improve public transit to the degree that it offers all residents a viable alternative to the

automobile and to the extent that the system is consistent with environmental quality aims and the improved livability of the neighborhoods. Clearly, improving the ease of automobile travel is far removed from environmental quality aims in regard to air and noise pollution and land conservation.

While communities in Marin County are not in a position to implement a county-wide transit plan, they can endorse plans of regional agencies and influence the county and the Golden Gate Bridge, Highway and Transportation District to provide necessary and desirable service. Also, communities should promote land use patterns which facilitate higher transit use. Each local jurisdiction will be asked to approve the choice of right-of-way for the intra-county transit system as it goes through their community and, therefore, the communities must adopt specific policies in advance so that they have a basis for their decision. These policies and recommendations for Corte Madera follow:

(1) Provide an exclusive right-of-way for transit in the corridor of U.S. 101 as soon as feasible. The exclusive bus right-of-way should be designed to permit its conversion to a rail or other high-speed, high-capacity system in the future;

(2) Provide a transit station in the U.S. 101 corridor coordinated with the redesign of Tamalpais Drive interchange. This station will be equally accessible to all Corte Madera residents and would be located adjacent to commercial areas where parking arrangements could be made between the Transit District and the property owners. This location will also encourage people to use transit for shopping purposes as well as for commuting;

(3) Investigate the feasibility of providing local shuttle transit service within Corte Madera to the transit station and shopping facilities, as well as to other social and community services in the Town and adjacent communities;

(4) Areas should be designated for (a) car-pool passenger pickup and delivery and (b) discharge and pickup of bus passengers transferring to or from private automobiles;

(5) Bus shelters should be provided at any transit stops.

d. Scenic Roadways and Highways. State law now requires that general plans include a scenic highway element for the establishment, development and protection of scenic highways. Designation of such highways would enable the local jurisdiction to take the necessary actions to protect the scenic and historic assets of the area through which the highway passes. This could include regulation of land use, site planning, control of outdoor advertising, control of earth moving and landscaping, and the design and appearance of structures. Likewise, the local jurisdiction can designate local routes as scenic roadways and

could establish similar design criteria for the lands adjacent to the rights-of-way.

The following describes the proposed routes. The Circulation Element recommends the designation, whereas the section on Community Appearance and Environmental Quality recommends design principles and standards to assure that the scenic attributes of these roadways are maintained.

(1) Paradise Drive. This roadway is the only through route in east Corte Madera and around the Tiburon Peninsula to the City of Tiburon. It begins as a four-lane road as it passes by the housing development of Marina Village, Mariner Cove, Marin Estates, Mariner Highlands and then becomes a twisting two-lane road for much of the remainder of the route. Views from the roadway are constantly changing from water to hills, with a variety of vegetation and land forms, and the experience is quite different when travelling in either direction. Glances of the Bay are available at various points, and the higher elevation of the Roadway near the northeastern end of the peninsula affords beautiful views of Corte Madera, Larkspur and adjacent communities as well as views of the western hills and ridges, including Mt. Tamalpais and lesser peaks.

(2) Tamalpais Drive. Tamalpais Drive is the main route through west Corte Madera and is approximately one mile long. If improvements are made in the interchange with U.S. 101, and the roadway realigned, Tamalpais Drive will become continuous with the Paradise Drive through the connection over San Clemente Drive. A combination of land uses currently line Tamalpais Drive, including service stations, residences, commercial establishments, the Town Hall, police and fire departments, and the Town Park. However, the portion of the roadway from the freeway to the Town Park is four lanes with a well-landscaped median. Distant views from the street are impressive. Westbound are views of the hills and ridges with the dense, tree covered vegetation that has become the major image of the community; eastbound are views of the East Bay Hills and on clear winter days a snow-capped Mt. Diablo is often visible. This street provides the primary visual encounter with the western portion of Corte Madera and as such deserves special attention. Moreover, Tamalpais Drive will be the important scenic link between Paradise Drive and Corte Madera Avenue.

(3) Corte Madera Avenue. This road winds through the hillier sections of Corte Madera and becomes Magnolia Avenue in Larkspur and Casino Alto is Mill Valley. North Redwood Avenue, the street is lined with older retail establishments and homes. South of Redwood Avenue, development along the roadway becomes less dense and for the section over Corte Madera Ridge and into Mill Valley, most traces of urban environment disappear. The roadway is lined on both sides with a dense tree cover, and the narrow, two lane twisting road discourages high speeds.

(4) U.S. 101. The portion of U.S. 101 through Corte Madera should be designated as an official California Scenic Highway and be subject to all of the regulations thereof. Views from the roadway are spectacular in some sections in southern Marin: The Bay; San Francisco Skyline and the Golden Gate Bridge become visible immediately after the Waldo tunnel. In Corte Madera, the views are considerably varied when travelling either north or south; the expanse of open space to the north and west; The Bay with hills and ridges to the east and south. Future development should be regulated to provide more attractive landscaping and better attention to design and siting of adjacent structures. The Town should seek to upgrade the landscaping within the freeway corridor.

(5) Parking. It is recommended that Corte Madera amend its Zoning Ordinance to require that all new single-family residences, including all new types of housing in planned unit developments, be required to provide a minimum of two off-street parking spaces per unit. Although this provision would not be retroactive and, therefore, would not help in alleviating the on-street parking problem in established neighborhoods, it will prevent a further increase in parking problems. New provisions should also be required for multiple-unit dwellings. Although the Housing Element endorses the policy of providing larger apartments for families, most apartments will continue to be occupied by couples without children or by two or more unrelated individuals. In the latter situation, each person usually has their own automobile, thus creating a shortage of off-street parking facilities. Parking standards should be based on the size of the apartment, rather than on a single standard for all apartments. This requirement should be as follows: 1- 1/2 parking spaces for efficiency and one-bedroom; 2 parking spaces for two-bedroom; and 3 parking spaces for three or more bedrooms. This should provide sufficient off-street parking for all residences as well as for most guests. Additionally, existing ordinances, specifically the PD provision, should be redrafted so as to clearly provide for sufficient guest parking.

On site parking requirements for all proposed developments in all other zoning categories should be carefully evaluated to assure that automobiles do not spill over into other public streets.

e. Pedestrian and Bicycle Circulation. A pedestrian and bicycle network must be developed in Corte Madera to provide safe movement for the rapidly growing segment of the community that walks or relies on bicycles for local transport. Bicycling has not only become an extremely popular recreational activity throughout the United States, but is also being used by greater numbers of people as a transportation mode to get to work and school, to reach transit stations and for shopping and visiting. Motorized vehicles should not be allowed to use the exclusive bicycle and pedestrian trail systems. Wherever possible, the bicycle paths and the pedestrian paths should be separated.

(1) The Northwestern Pacific Railroad right-of-way could be converted into a linear park as recommended in the Open Space and Conservation Element. With a portion of the right-of-way devoted to the trail system. This route will traverse major portions of east and west Corte Madera, will provide more than 3.3 miles in a continuous trail in Town separated from vehicular traffic, and will provide access to such places as the Town Square, Redwood High School, Larkspur Ferry Terminal, proposed shoreline park and habitat preserve and the proposed commercial area east of U.S. 101. Additionally, short links can be provided to connect this trail with the Town Hall, Town Park, Neil Cummins School and the proposed transit station on U.S. 101;

(2) Corte Madera should work jointly with the adjoining cities to extend the trail system into these communities;

(3) Consideration should be given to providing bicycle and pedestrian trails through Madera Gardens in west Corte Madera so that a connection can be established between the Town Park and Redwood High School. This would also connect with the railroad right-of-way trail;

(4) An exclusive bicycle and pedestrian overpass should be constructed between Paradise Drive and Casa Buena where it comes closest to Meadowsweet Drive (Near Deer Run). This will afford safe access from east Corte Madera to the Public Library and other town services west of the Freeway. This pedestrian lane could then continue along along Casa Buena Drive to Tamapais Drive to Eastman Avenue where a signal provides a safe bicycle and pedestrian crossing to the Town Park and Neil Cummins School;

(5) A trail system should be provided generally along Paradise Drive to provide a connection with the trail along the railroad right-of-way and over U.S. 101 as indicated in item number 4. Although the exact alignment of this trail will be determined after more extensive field surveys, it could run along or adjacent to the north side of the road. It could also be rerouted onto some less heavily travelled residential streets such as Spindrift Passage and then around the fire station and over an easement through a portion of the vacant parcels to the west;

(6) Easements could be acquired near the Bay and San Clemente Creek in east Corte Madera to provide a continuous Bay biking and nature study trail from Corte Madera to Tiburon;

(7) A hiking trail should be promoted along the Tiburon Ridge to connect Tiburon, unincorporated lands and Corte Madera. Links should be provided from the lowland portions of Corte Madera into the ridge. This would include trails through the quarry site, Madera del Presidio, and the Deffebach Property. This network should then connect with the remainder of the county system to provide access to Tamapais State Park, watershed lands and eventually to the other scenic and recreational areas along the Pacific coast;

(8) When a transit station is developed within the highway right-of-way, access for pedestrians and bicycles should be provided for and connected to the town's overall trail system;

(9) Existing trails, rights-of-way, and easements in various parts of the community provide in many cases open space, small linear parks and pleasant pedestrian access ways. If these are available and of significant public importance, they are to be incorporated into this Circulation Policy.

3. Recommended Implementing Approaches. Circulation Element policies call for the improvement of freeway safety, the reduction of through traffic on local streets, the development of a rapid transit system on U.S. 101, the institution of local transit service, the designation of scenic roadways, more stringent off-street parking requirements in residential areas, and the development of a complete network for pedestrians and bicyclist that is separated from vehicular traffic. Most of these policies will require direct capital costs if they are to be implemented. The exceptions are the amendments to the Zoning Ordinance for the provision of strict parking standards as discussed in the section on Parking above, and the designation of scenic roadways and highway in Corte Madera. For the latter, it will be necessary for the Town to recommend to the State Scenic Highways Commission that the portion of U.S. 101 through Corte Madera be designated as a scenic highway. If the Commission concurs with this recommendation, it will then forward the request to the State Legislature. Approval of this designation by the State Legislature will then allow Corte Madera to enforce specific design standards and principles along the right-of-way as outlined in the chapter on Community Appearance and Environmental Quality. It will be the responsibility of Corte Madera to designate the recommended local streets as scenic roadways and then adopt and enforce the necessary design standards.

Almost all of the remainder of the policies will require direct capital cost expenditures and most can be implemented through the use of county, state and Federal monies. However, local contributions may be necessary in some cases where Federal funds are involved, and improvements in intersections, new signals and portions of the pedestrian and bicycle network may, in part, be the financial responsibility of Corte Madera. Methods that can be employed to finance major circulation improvements include:

- General Funds
- General Obligation Bonds
- Tax Increment Financing

Real Estate Transfer Tax
Special Assessment District
County Funds
California Gas Tax Funds
California Highway Funds
California Parks and Recreation Bonds
Federal Land and Water Conservation Fund
Federal Open Space Land Program
Federal Urban Mass Transportation Administration Grant
Federal Highway Trust Funds

APPENDIX D

**LETTERS OF COMMENT AND RESPONSES
CONCERNING THE DRAFT ENVIRONMENTAL STATEMENT**

APPENDIX D

LETTERS OF COMMENT AND RESPONSES
CONCERNING THE DRAFT ENVIRONMENTAL STATEMENT

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94111

FEB 15 1974

Colonel James L. Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister St.
San Francisco, CA 94102

Dear Colonel Lammie:

The Environmental Protection Agency has received and reviewed the draft environmental impact statement for the Hahn Shopping Center Permit Application, Marin County, California.

EPA's comments on the draft statement have been classified as Category ER-2, specifically, environmental reservations to the proposed action. Our comments on the draft statement are provided in the enclosure. The classification and the date of EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal actions under Section 109 of the Clean Air Act.

Definitions of the categories are provided on the enclosure. Our procedure is to categorize our comments on both the environmental consequences of the proposed action and the adequacy of the impact statement at the draft stage.

Thank you for the opportunity to comment on this draft statement. We would appreciate receiving a copy of the final statement.

Sincerely,

Paul DeFalco, Jr.
Paul DeFalco, Jr.
Regional Administrator

Enclosures

cc: Council on Environmental Quality, Wash., D.C. 20460
Attn: Editor, 102 Monitor

D-1

LETTER D-1

D-2

-2-

The noise levels described [57-62dB(A)] are suitable for a commercial development of this type. However, these noise levels may have a deleterious effect on the wildlife found in the adjacent marsh areas and feeding ponds. A more thorough evaluation of the effect of noise on wildlife is necessary. In addition, a discussion of construction noise and blasting and their effects should be included.

Comments on the draft environmental impact statement for the Hahn Shopping Center Permit Application, Marin Co., California.

The statement does not have sufficient data or information in the air quality sections to justify the statements made in the text. There is only one table of air quality data provided and the derivation of the numbers in that table is not provided, although five references are listed. One should not have to research five technical documents in order to determine where the numbers came from. Footnote "b" in Table 2 needs clarification.

The information, Table 2, is on a scale of time and space that is larger than would enable an assessment of air quality resulting from construction of the project. From the information given it cannot be determined whether or not violations of the National Ambient Air Quality Standards (NAAQS) would occur.

The time periods used in specifying the NAAQS should be considered in the analysis. Larsen's method, as refined by Thullier, is applicable to regional analysis and "average" conditions, but it is not sufficiently detailed for the analysis of a shopping center.

Consideration of traffic versus air quality, parking versus air quality, as well as the background values that were used, is necessary. There is no mention of the adequacy of the transit service to the shopping center. Any separate facility which will attract a large number of people is ideal for providing transit service. A shopper shuttle, jitney, or dial-a-ride bus service may provide alternative ways of getting to and from the center.

The treatment of solid waste disposal should explore the quantities that will be generated. Paper is in short supply, especially corrugated cardboard which will be one of the major solid wastes of commercial facilities. Mitigating measures should be explored to manage the quantities of solid wastes.

The noise impact of the proposed development has not been adequately addressed in the draft EIS. No reference is cited for the noise levels described on page 11. A complete description of the noise impact such as that found in the environmental impact report (Sedway/Cooke, February 1973) should be included in the impact statement.

CHAPTER 3
PREPARATION, APPROVAL, AND
DISTRIBUTION OF COMMENTS ON
ENVIRONMENTAL IMPACT STATEMENTS

TABLE OF FEDERAL AGENCIES
REVIEWING THE EIS REPORT

Environmental Impact of the Action

EO--Lack of objections

EPA has no objections to the proposed action as described in the draft impact statement or suggests any major changes in the proposed action.

ER--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of requested alternatives or modifications is required and has asked the originating Federal agency to reassess these aspects.

EU--Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

Adequacy of the Impact Statement

Category 1--Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed action on the region as well as alternatives reasonably available to the proponent or action.

Category 2--Insufficient information

EPA believes that the draft impact statement does not contain sufficient information to allow full and complete assessment of the impact of the proposed project on the environment. From the information submitted, the Agency is unable to make a preliminary determination of the impact of the proposed action. EPA has requested that the originator provide the information that will be sufficient to allow full and complete assessment.

Category 3--Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed action or that the statement contains major omissions or errors which could result in a misleading or incomplete assessment of the impact of the proposed action on the environment. EPA has requested that the originator provide the information that will be sufficient to allow full and complete assessment.

If a draft impact statement is found to be inadequate, the originator must submit a revised impact statement to EPA for review and comment.

D-1

D-2



UNITED STATES
DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY
PACIFIC SOUTHWEST REGION
BOX 36096 - 450 GOLDEN GATE AVENUE
SAN FRANCISCO, CALIFORNIA 94102
(415) 556 8200
March 1, 1974

Colonel James Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

Dear Colonel Lammie:

The Department of the Interior has reviewed the draft environmental statement for Permit Application for the Hahn Shopping Center, Marin County, California.

The salt marsh lagoons or ponds referred to on page 3 are elsewhere identified as "cut-off meanders". Available information suggests the present lagoons were once components of a tidal meander. For consistency, we suggest that the meander terminology be used throughout the statement.

An environmental working paper prepared for the West Contra Costa County Dump asserts that it will operate 52 years instead of the 40-year period stated in the draft. We suggest this inconsistency be corrected.

The recreation section (page 36) does not say that the restrictive covenant will safeguard wildlife; conversely, on page 45, paragraph 2, it is stated that it will. If the welfare of wildlife and its habitat will be protected by the covenant, this condition should be clearly stated throughout the text.

Mention is made on page 43 of Table 3. We suggest that this be thoroughly discussed in the text in order that reviewers will be aware of potential fish and wildlife benefits that would accrue without the project. The draft currently describes the wildlife mitigation which would occur with the project.

D-5

LETTER D-2

-2-

In the section covering irreversible and irretrievable commitments of resources (page 50, paragraph 3), the definition of irretrievable appears incorrect. We believe that annual fish and wildlife losses caused by production foregone during the project life are irretrievable resource commitments whether or not the affected species can be reestablished.

It is incorrect to assume that displaced animals (page 50, paragraph 3) will occupy other habitat without detrimental effects. When habitat is destroyed, the wildlife population dependent upon it is eventually lost.

We feel that the statement does not provide substantive information on project effects on archeological resources. An archeological survey of the project area has been proposed, but the draft does not discuss subsequent action. We suggest that an archeological survey be performed by a professional archeologist while the project is in the planning stage. Many of the San Francisco Bay area's original prehistoric sites have been destroyed by urbanization. Consequently, it is important that any remaining sites be identified and evaluated. Mitigation measures should be implemented before the surface is disturbed by project construction.

We appreciate the opportunity to review and comment on the draft statement.

Cordially,

Webster Otis

Webster Otis
Special Assistant to the Secretary

cc: Director, OEPR, Washington, D. C.
Regional Director, BSAW, Portland
Regional Director, NPS, San Francisco
Regional Director, BOR, San Francisco



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

REGIONAL OFFICE
30 FULTON STREET
SAN FRANCISCO, CALIFORNIA 94102
Office of Environmental Affairs

OFFICE OF THE REGIONAL DIRECTOR

February 22, 1974

J. L. Lammie
Colonel, CE
District Engineer
Department of the Army
San Francisco District, Corps
of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Lammie:

The Draft Environmental Impact Statement for the Hahn Shopping Center, Corte Madera, California, has been reviewed in accordance with the interim guidelines of the Department of Health, Education and Welfare as required by Section 102(2)(c) of PL 91-190.

The proposed action calls for the development of a retail shopping center on 45.2 acres of bayside marshlands. An estimated 500,000 cubic yards of dry fill will be required. The loss of the 45.2 acres may have a significant impact on the natural wildlife of the area as well as on the migratory birds using the area as a fly-way. Recognition of these effects is made in the statement.

The statement further indicates that the project will not be growth inducing to the town of Corte Madera or surrounding communities. Should this occur, the elementary and high school districts will be required to exceed their present capacity. Shifting school district boundaries is suggested as a possibility should the student population increase. Is this a feasible alternative?

Review of the material submitted indicates no significant problems within the scope of comment of this agency. We defer to the Environmental Protection Agency for comments relative to air and water quality and solid waste management, and to the Department of Interior for specific comments relative to wildlife preservation. Consequently, no comments or suggestions are proffered at this time.

The opportunity to review this statement was appreciated.

Sincerely yours,

James D. Knochenhauer
James D. Knochenhauer
Regional Environmental Officer

c: CEQ

D-7

LETTER D-3

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION - REGION NINE

REGIONAL
CALIFORNIA
NEWARK
NEWARK

450 Golden Gate Avenue, Box 36096, San Francisco, Calif. 94102

February 12, 1974

IN REPLY REFER TO
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Mr. J. L. Lammie, Colonel
District Engineer
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Lammie:

We have reviewed the Draft Environmental Impact Statement for the Hahn Shopping Center Permit Application in Marin County, California, and have no specific comments to offer. However, we suggest that the District & Office of the California Department of Transportation be contacted in regard to traffic circulation impacts of the proposed project.

We appreciate this opportunity to review the subject Draft EIS.

Sincerely yours,

F. E. Hawley
F. E. Hawley
Regional Administrator

D-6



D-8

LETTER D-4

FEB 14 1974

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N.W.
WASHINGTON, D.C. 20006
March 21, 1974

Colonel J. L. Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Lammie:

This is in response to your request of January 4, 1974, for comments on the environmental statement for the Mahn Shopping Center, Marin County, California. Pursuant to its responsibilities under Section 102(2)(C) of the National Environmental Policy Act, the National Park Service and the U.S. Forest Service have determined that your draft environmental statement appears procedurally adequate; however, we have the following substantive comments to make. In order to meet the requirements of the National Historic Preservation Act of the Cultural Environment," of May 13, 1971, the environmental statement should include evidence of the further archeological survey work suggested by the National Park Service and the U.S. Forest Service. Sincerely, Russell W. Porter, Director, National Park Service, U.S. Department of the Interior, Washington, D.C. 20540

Should you have any questions on these comments or require any additional assistance, please contact Louis S. Wall of the Advisory Council staff, P.O. Box 26552, Belmar Station, Denver, Colorado 80226, telephone (303) 234-4946.

Sincerely yours,

Ann Webster Smith
Director, Office of Compliance

Dear John:

The Council has completed its review of the draft environmental impact statement prepared for the proposed Hahn Shopping Center, Marin County, California. While we have no problems with the proposed Corps permit to be granted for the construction of this facility, the final impact statement should include material on the following points:

- 1) A description of the overall redevelopment project is required. The redevelopment boundaries are considerably more extensive than the project area, and take in a significantly greater amount of wetland acreage. It is not clear from the draft impact statement whether this redevelopment project is Federally-supported by the Department of Housing and Urban Development or by other Federal activities and programs. A description of the nature of the redevelopment and any Federal involvement in it would be useful. To the extent that there is other Federal agency involvement, this might be an appropriate time to include an overall evaluation of the redevelopment area including a commitment in relation to the additional wetland area not affected by the immediate project and permit.
- 2) The issue of congestion on the adjacent highway is extremely important and we would suggest that the Corps of Engineers consider working with the State Highway Department and the state highway department to assure that the improvements to the highway are properly timed so as to prevent a high degree of congestion as a result of project construction.

1971 and 1972. On 15 Oct. 1970, with address to the President and Congress in the field of Historic Preservation, he commended historic preservation as a single governmental activity, with private initiatives, addition to the dissemination of information, encouraging public use of and participation, recognition of the need of special studies, advising in the promotion of legislation, and recommending appropriate financing and training. The Council also has the responsibility to conduct an Federal or Federally-assisted investigations that have an effect on historic preservation in the United States National Register.

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LETTER D-5

D-10

LETTER D-4

2

The final impact statement should indicate the degree to which the construction activities on the highway improvements will be completed prior to the added burden of vehicles resulting from the proposed shopping center.

- 3) The final impact statement should indicate more clearly the overall impact of the project on wildlife habitat. At present, the description does not indicate the degree to which the areas set aside for wildlife habitat will be able to accommodate those species, including endangered species, which may be displaced by the project.

We hope these comments will be helpful in the preparation of the final impact statement. Please let me know if we can be of assistance.

Sincerely,

Stephen F. Sloan
Senior Staff Member

LTC John P. Wall
Assistant Director of Civil Works
Environmental Programs
U.S. Army Corps of Engineers
San Francisco, California

NORMAN B. LIVERMORE, JR.
SECRETARY

RONALD REAGAN
GOVERNOR OF
CALIFORNIA

OFFICE OF THE SECRETARY
RESOURCES BUILDING
1416 NINTH STREET
SEASIDE



THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

APR 10 1974

Colonel James L. Lammie
District Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

Dear Colonel Lammie:

By your letter of January 4, 1974, you transmitted a Draft Environmental Impact Statement for the Hahn Shopping Center to be located in Marin County on San Francisco Bay requesting comments and recommendations from the State of California.

Review of the EIS has been coordinated with the Departments of Conservation, Fish and Game, Health, Navigation and Ocean Development, Parks and Recreation, Transportation, and Water Resources; the State Lands Commission; State Water Resources Control Board; and San Francisco Bay Conservation and Development Commission.

The report is inadequate in that it does not contain sufficient data for evaluation of the impact on state highway traffic conditions or on drainage conditions. There is no mention of possible effect of the proposed land fill on the adjacent Route 161 Freeway foundation and drainage conditions. Specific comments are included in the attached pages.

The 32-acre marshland area, to be donated to the Town of Corte Madera, contains two ponds which receive storm or drainage water throughout the year. The water in these ponds is very important to many species of wildlife. During consultations with the representatives of the Department of Fish and Game, the project sponsor and the Town of Corte Madera, concern was expressed about the future water supply for the ponds. Various

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FINAL ENVIRONMENTAL STATEMENT, HAHN SHOPPING CENTER (MARIN MALL--ETC(U)
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water supply alternatives were discussed, including the installation of tide gates to utilize Bay water during the summer months. It is recommended that the Town of Corte Madera provide the necessary water controls to maintain an adequate water level in the ponds.

This statement is also considered to be inadequate with respect to certain geologic factors which could result in unanticipated environmental problems. The attached pages containing specific comments pertinent to these factors are an integral part of this letter.

We appreciate the opportunity to review and comment on your environmental impact statement.

Sincerely yours,

N. B. LIVERMORE, JR.
Secretary for Resources

By *[Signature]*

Attachment

Specific Comments on the
Draft Environmental Statement
Hahn Shopping Center
Marin County

Specific comments relative to highway conditions are as follows:

Pages 14, 18 - No basis is given for the statement that access between east and west Corte Madera is extremely hazardous over the Tamalpais Drive interchange since sidewalks are not provided (except to reach the bus stops at the freeway elevation). The fact is that both pedestrians and bicyclists can cross the freeway by way of paths off the traveled way and spiral ramps that connect the ground level with the overcrossing roadway level; one ramp on each side of the through freeway lanes. At the upper level, the ramps are connected by a sidewalk on the overcrossing structure. We have reviewed accident records for the period January 1970 to October 1973 which reveal a single accident involving a pedestrian and no accident involving a bicycle. The single pedestrian accident involved an adult attempting to walk on or across the freeway lanes; only slight injury resulted.

Pages 17, 30 - The statement that the major portion of Route 101 between Tamalpais and Lucky Drives must be reconstructed is mystifying. The District has no plan for such reconstruction, except for the present proposal to add additional lanes to the freeway.

Pages 38, 39, 40 - The section on "vehicular circulation" contains much discussion of various additions to and modifications of the Route 101 Freeway. Some of these changes have been investigated. However, no decision has been made to recommend these changes. One reason for this is uncertainty regarding local desires. For example, the William Avenue interchange would be in Larkspur and that City is believed to be opposed to the proposal. The entire package of proposed changes requires much more investigation than it has had to date.

The changes discussed on pages 39 and 40 cannot be understood adequately without a schematic diagram or illustration of some kind that is not available in the Draft statement.

It is appropriate to point out that the present outlook for future financial capability of the Department of Transportation to accomplish freeway changes of the magnitude envisioned by the draft statement suggests that it will be many years before they could be constructed unless some alternate to present financing is arranged.

D-13

Specific comments pertinent to geologic factors are as follows:

Pages 4, 5 - Data on clay mud thickness are inadequate to determine seismic response at surface.

Page 5 - Statement on seismicity too brief in that it does not recognize the inevitability of major seismic events.

Pages 9, 19 - Statements on nature and method of placement of fill seem contradictory or at least inconclusive.

Pages 19, 20 - Although hazards of construction on filled land over Bay mud are identified, the mitigation of these hazards is not adequately described, nor are specific mitigation measures identified.

Page 20 - Statements regarding settling after surcharge by additional fill are confusing (e.g., the statement about 80 percent settlement in 10 years is not followed by adequate assessment of further settlement after final fill).

Page 20 - The specific investigations to determine seismic risks should be undertaken before filling.

Page 21 - The statement regarding seismic risk "no real seismic hazard" is in conflict with the statements regarding liquefaction and other ground failure hazards. Also, the statement "project site is better than average" is misleading in that average is not defined.

The potential effects of seismic events on public utilities and roads are not considered.

No information is provided as to the professional status (discipline or registration) of persons responsible for this report.

D-15

D-16



MARIN MUNICIPAL WATER DISTRICT

February 15, 1974
File 090.2

THE MARIN WATER DISTRICT
COURT HOUSE, CALIFORNIA AVENUE
SAN FRANCISCO, CALIF. 94102
Colonel J. L. Lummie, District Engineer
San Francisco District
United States Army Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

Attention: Mr. Tom Crews

Re: Review of RIR - Hahn Shopping Center, Marin County, California

Dear Mr. Crews:

Water consumption within the service area of Marin Municipal Water District exceeds the 26,000 acre foot net safe yield of the District's water supply by about 25 percent. Because of this situation, the Marin Municipal Water District's Board of Directors passed an ordinance on June 7, 1973, which prohibits new pipeline extension to the District's distribution system unless a Pipeline Extension Agreement has been approved by the Board prior to April 30, 1973.

There are no existing water distribution pipelines in the area proposed for the Hahn Shopping Center. Ernest W. Hahn, Inc. applied for a Pipeline Extension Agreement on April 26, 1973 but failed to gain approval on the agreement before the moratorium ordinance went into effect. Consequently, the District cannot provide a water supply to the Center in the foreseeable future.

The estimated annual water demand of 23 acre feet appearing at the end of the first paragraph of the section on Water Supply, Page 24, is greater than Marin Municipal Water District's estimate of approximately 18 acre feet. The Water District's estimate is based upon the number of acres rather than the number of square feet. This is not to suggest that the estimate in the RIR is unreasonable nor that the basis used for the estimate is any less supportable than the District's.

Marin Municipal Water District concurs that the activities associated with installation of a water system would constitute minimal impact compared to the total project construction activity.

Very truly yours,

MARIN MUNICIPAL WATER DISTRICT

[Signature]
C. W. Kowalec
Manager of Land Management

JRP:B/S

D-16

LETTER D-8

A. No. 1000 1000 1000 1000
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February 13, 1974

Colonel J. L. Lammie, Chief Engineer
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Re: Draft Environmental Impact Statement,
Mahn Shopping Center, Corte Madera, CA.

Dear Colonel Lammie:

The Marin Conservation League appreciates the opportunity to review and comment on the Draft Statement referred to above.

Attached is our response to those aspects of the proposal and the Environmental Impact Statement which are of major concern to the League.

Sincerely,

Robert F. Raab

Robert F. Nash, President
Frank Moncrief, First Vice-President
Douglas Christensen, Director

1971 (cont.)

attachment

To Preserve and Protect the Natural Assets of Marin County for All People

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LETTER D-9

- 2 -

A representative of the State CALDOT, when asked by a member of the General Plan Committee of Corte Madera as to the time schedule for completing the interchange, stated that a realistic estimate is that it would not be completed for ten years. We believe this is so critical issue that, if all the other circulation problems were solved, no project of the magnitude of the regional shopping center should be started before completion of the interchange.

The Environmental Impact Statement notes that "provision of a new roadway connecting the proposed William Avenue interchange and Corte Madera Avenue would more evenly distribute both commuter trips and shopping center-bound trips, thus relieving some pressure on Tamalpais Drive." The Statement was probably made before the proposed William Avenue interchange was eliminated from the Corte Madera General Plan.

3. Geologic Hazards. The Environmental Impact Statement devotes three pages to the subject of "Geology and Soils." It properly identifies the major issues which relate to: 1) the nature of the underlying soils in the proposed fill area; 2) the importance of using a method of fill which will reduce some of the hazards of differential settlement; 3) potential damage to utilities, roads, structures, and 4) seismic hazards which are potentially serious.

The Statement does not give sufficient attention to testimony given by Michael Praester (Lac and Praester) at the June 4, 1973 hearing on the fill proposal then before the Corps of Engineers. The Statement does refer to Praester's report prepared for the San Francisco Bay Conservation and Development Commission as to "requirements for fill developments over mud, and various possible problems with Bay fill." We also suggest that if Mr. Praester has not already submitted material appearing in the section of the Statement on "Ecology and Soils," his comments be solicited by the Corps prior to preparing the final report.

4. Socio-economic impact. WCL believes the Corps is not justified in accepting, without reservation, the economic analysis made by Urban Projects, Inc., as the contractor, for the proposed shopping center at the intersection of Highway 1 and Highway 2, as set forth in the firm of Seabury/Cooke as a part of Seabury/Cooke's "Environmental Impact Report for the Corde Madera Redevelopment Project Area Study I Redevelopment Plan, February 3, 1973." Both the assumptions of the study and its conclusion that "there will be sufficient market in 1975 to support the proposed regional shopping center. . ." was challenged by Randall Fosden, economist, at the June, 1973 hearing by the Corps of Engineers.

MCL in its presentation of June 4, 1973, questioned the economic viability of the proposed center and its probable adverse effect on the existing Corte Madera Shopping Center. The League urges that the Corps of Engineers consult Mr. Posdamer and other economists before preparing its final report.

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20. The author of the following passage is
 a person who is *not* a member of the
 New Right. Which of the following
 differs most from
 the author's position?

February 15, 1974

RESPONSE TO DRAFT ENVIRONMENTAL STATEMENT
HARDY SHOPPING CENTER, CONTE MADERA, CA.

1. Scale of the Project. This is a massive project relative to the size of Corte Madera, a town of less than 9,500 whose citizens have expressed a strong desire to preserve its residential characteristics. Even with the reduced size of the shopping center, it is proposed that there be 4,647 parking spaces. This represents one-half of a space for every person living in Corte Madera.

The Environmental Impact Statement does not deal with this issue. It does state that the visual impact will be "minimal when viewed from surrounding areas."

2. Increase in Traffic and Noise. While the Environmental Impact Statement comments on the "localized increase in traffic and noise" which the regional shopping center will generate, and suggest some mitigation measures, we believe inadequate attention has been given to concerns expressed by citizens of Corte Madera who have members of the General Plan Committee relative to this factor.

The "Circulation Element" of Sedway/Cooke's plan is predicated on building the shopping center. The need to increase accessibility of those living east of the highway to schools, the library, recreational facilities, and to those living in "old" Corte Madera west of the highway are subordinated to the excessive demands of easy access to the proposed regional shopping center.

The Environmental Impact Statement recognizes that road improvements proposed by the California Department of Transportation are essential if the shopping center is constructed. One improvement is the reconstruction of Tualupa Pass Highway 101 interchange. The report notes that "the critical issue, as yet unsolved, regarding the proposed road improvements is the time involved in making these improvements if plans are completed for them and the feasibility of finishing them before construction of the shopping center would begin."

For discussion and dissent the second session of March closed with an Evening

10-18

5. Use of the Re-development Mechanism. MCL stated at the June 4, 1973 hearing that "it is not sound public policy to 'redevelop' what has never been developed." Although EIS does not give attention to this issue, we believe it cannot be separated from the Statement's analysis of socio-economic impact. Not only does the Redevelopment Area embrace land that has a minimum of present development, but it excludes the one large commercial development that does exist--the Corte Madera Shopping Center.

6. Alternatives. The EIS considers eight alternatives. It concludes that the optimum solution "appears to be the development of the two adjacent sites within the framework of their specialities." (The proposed Regional Center and the existing Corte Madera Shopping Center.)

The Marin Conservation League, because of the factors already discussed, does not agree with this conclusion.

Sincerely,

Robert F. Ruck

Robert F. Nash, President

Frank Moncrief, First Vice-President
Douglas Christensen, Director

cc: City Planning Commission, Corte Madera
City Council of Corte Madera
City Council of Larkspur
Board of Supervisors, Marin County
State Senator Peter Bohr

D-20

Review of Draft
ENVIRONMENTAL IMPACT STATEMENT OF
U.S. ARMY ENGINEER DISTRICT, SAN FRANCISCO
CHIEF OF ENGINEERING ON
Hahn Shopping Center Permit Application

by Brenda Brown, Coordinator of new
disbanded Corte Madera Citizens
for Rec-11.
Member of General
Plan Study Committee,
410 Sausalito Street
Corte Madera, California

January, 1974

I was greatly disappointed in the draft environmental impact statement on the Hahn Project prepared by the Army Corps of Engineers.

By various areas

1. Most of the information and opinions contained in this statement simply duplicate those contained in the Safety Cooke R.F.R.
2. Only one of the several experts who gave testimony at Corps public hearings raised serious question on the use of Area A for a shopping center was mentioned in this statement.
3. Many arguments used by citizens in opposition to the center were not mentioned in this report.
4. Many of the facts and opinions in the statement could have been used to build a strong case against the center.
5. Important areas were not explored by the Corps' statement.
6. The Corps relied much too heavily on estimates and predictions to build their case.

I will now discuss many of the above points more thoroughly with reference made to the text of the statement wherever possible.

CRITICISMS EXHIBITED BY THE ARMY CORPS STATEMENT

1. Corte Madera elections indicated strong local opposition to the center.
Text: page 1, second paragraph. "It should be noted, however, that... the mayor and two other councilmen who supported the shopping center have been recalled by a Recall Election in Corte Madera."
Not only were the three councilmen in favor of the Hahn Center recalled, but two of the three councilmen elected to replace them are strongly opposed to the center. Moreover, of the ten candidates who ran for the three council seats, the seven opposed to the center drew almost 70% of the total of votes cast for each candidate.

2. The impact of San Francisco will continue to pose strong support by Marin County residents.

Text: page 15, first paragraph. The assumption of the first paragraph is that with the new regional shopping center, the department store merchandise

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LETTER D-19

INFORMATION CONTAINED IN THE STATEMENT WHICH COULD EASILY BUILD A CASE AGAINST THE CENTER

1. Sewage problems

Text: page 7, second paragraph. "During extremely wet weather, raw sewage must bypass the Paradise Drive pumping station and is discharged to San Clemente Creek."

How much more aggravated will this condition be by the additional sewage from the new shopping center?

2. Area as "sink" for air pollutants

Text: page 12, second paragraph. "In light of current research on the importance of both soil and vegetation as a 'sink' for air pollutants, it would appear that the open land close to Highway 101 and at the mouth of heavily polluted Rose Valley assumes great importance for a large number of people."

Won't the effect of this sink be severely damaged by the Hahn project?

3. Potentially dangerous ground conditions

Text: page 19, second paragraph. "The performance of many types of structures in areas underlain by Bay Mud may be poor. Bumping, permanent ground movements or liquefaction may occur in this area during future earthquakes, and the intensity of shaking may be greater than on higher ground."

Why risk such potentially dangerous conditions?

4. Destruction of wildlife habitat

Text: page 26, first paragraph. "The development of a region-serving commercial center on the project site (Area A) would destroy wildlife habitat in a limited open space area which is abundant with wildlife throughout the year and is close to schools and homes, making it both attractive and important for recreation and education."

Another argument from the text which could be used to support opposition to the center.

5. Inadequate overpass

Text: page 30, second paragraph. "The present width of the Tamalpais overpass is not sufficient to meet the new traffic conditions."

A prediction was made that it will be ten years before a new interchange could be built. What can be done about the inadequacy of the overpass in the meantime?

6. Alternative to center

Text: page 41, second paragraph. "With no shopping center the project might well be incorporated in the City's or County's open space lands, although the land is expensive and provisions for maintenance and conservation would have had to be made."

Has this alternative been explored?

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sales expert to San Francisco will be significantly less. This assumption ignores the fact that many commuters will continue to spend money in San Francisco. San Francisco will always have an appeal that Marin County can't match in its theaters, opera, and symphony, museums, tourist attractions and in its greater concentration of luxury stores and fine restaurants. People will always go there to work and to partake of its special attractions, and in so doing, will continue to frequent its department stores.

3. The Hahn Shopping Center does not guarantee tax benefits to Corte Madera.

Text: page 40, third paragraph. "The development of the regional shopping center, if in conformity with the policies of the Plan of Corte Madera, would produce the financial resources to allow the Town to pursue municipal programs and growth policies that would not be possible without the financial resources generated by the development of a regional center."

For at least five years and perhaps many more years, additional tax revenue accruing from the center would go to schools and to payment of the bonded indebtedness of the town. No one has been able to predict when Corte Madera could even begin to pursue a "high level of capital improvement". (page 40)

4. Many Corte Maderans oppose the tool of Redevelopment.

Many of us opposed to the center have questioned the ethics of using redevelopment money to, in effect, help a private developer develop marshland. The major intent of redevelopment funds was to redevelop blighted urban areas.

5. Seismic hazards are much more serious than what the Corps' statement reveals.

Text: page 11, first paragraph. "There should be no real seismic hazard to construction with the proposed project because the period length of the proposed structures will be short in relation to the extremely long period of vibration of the underlying materials (bay mud)."

Michael Franker, the expert quoted on page 19 of the statement said to me on January 18, 1974 that the first paragraph, from which the above quote came, was only half true. It didn't go far enough in providing the factual information which would show the hazard to be far more serious than described. The paragraph said that during an earthquake the forces induced into a structure built on bay mud would be less than those induced into a structure built on bed rock. However, ignored was the additional fact that during an earthquake, the fill crust above the bay mud was likely to disintegrate and develop large crevasses. Severe and streets would break up and the buildings themselves could topple because of the large ground displacement. He gave the 1906 earthquake as an example where three floors in the fill were produced, large enough for a horse to fall into.

6. The whole concept of a regional shopping center may soon be outdated.

- a. The energy crisis. Higher gasoline costs and greatly reduced supply will result in fewer auto and bus runs to a large department store complex, and then in declining department store sales.
- b. The inflationary cycle. More money spent on food and essential services will mean less money spent on department store purchases for many people.
- c. The combination of a. and b. may result in more home oriented activities, more casual lifestyle, less need for and dependence on department store goods.

D-22

7. Another alternative to center.

Text: page 45, last paragraph. "However, from an ecological viewpoint, one advantage of either alternative of expanding the Corte Madera Center is that it would not require any filling or any further intrusion into the Corte Madera Marsh."

Let's see what Capitol Associates plan for the old center and how Corte Madera citizens view this alternative.

8. Value of Marshland

Text: page 46, third paragraph. "The long term gradual destruction of the marshes of San Francisco Bay has resulted in a greatly increased value of any habitat used by wildlife."

OTHER IMPORTANT AREAS NOT EXPLORED BY THE ARMY CORPS ENVIRONMENTAL IMPACT STATEMENT

1. Redevelopment plans for downtown San Rafael

Text: page 34, second paragraph. "The regional and department store facilities found in the central area of San Rafael already serve a somewhat limited market and do not and will not directly compete with major regional centers."

There is no mention of the aims of redevelopment plans for downtown San Rafael and the possible effect of the Hahn center on a revitalized San Rafael downtown.

2. No present plans for Willits Avenue Interchange

Text: page 36, second paragraph refers to reduction of traffic congestion between Tamalpais and proposed Willits Avenue Interchange. The proposal for the Willits Avenue Interchange has been eliminated from the proposed Corte Madera General Plan.

What effect will this elimination have on traffic conditions aggravated by the new center?

3. No water

Text: page 8, sixth paragraph. "The proposed shopping center site... is served by the Corte Madera-Greenhouse Gravity System."

Jim Minton of the Marin Municipal Water District said to me on January 18, 1974 that the Hahn Corporation never made formal application for a water permit; therefore, the entire project is subject to the water rationing. Will this fact influence the Corps' decision on the fill permit?

FURTHER COMMENTS

1. Corte Madera center for regional commercial facilities?

Text: page 8, fourth paragraph. "The regional plan and Marin County General Plan specify 'Corte Madera area as center for regional commercial facilities.'"

These plans are merely suggestive rather than legally binding. They represent regional rather than local interests, and are based on the questionable assumption that a large region is greatly benefited by more than one regional commercial facility.

2. A buffer?

Text: page 18, fifth paragraph. "From a land use point of view, a high quality commercial center, or other commercial use, could be

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compatible with nearby land uses and would act as a buffer to the land east of the present railroad right of way."

Would a regional shopping center act as a buffer, with 20,000 to 30,000 cars predicted daily for the center?

3. Effect on existing retail facilities

Text: page 19, first paragraph. "In addition, such a center would help strengthen the existing retail establishments within the Town..."

At least sixteen Corte Madera stores don't believe this statement. In letters to County Supervisors, these Corte Madera Center stores vent an record opposed to the new shopping center.

4. Performance of projects built on Bay Fill

Text: page 20, first paragraph. "...and may Bay Fill projects which have been carried out using these techniques (to control the rate of settlement) have performed satisfactorily."

And many have not. N.B. condominiums on Lucky Drive, Greenbrae Marina houses, and Larkspur apartments.

5. Final level of fill

Text: page 20, 3rd paragraph says the surcharge will bring the building and to its final level.

My question is would the weight of a square foot of surcharge be the weight of a square foot of a building? By going to that after the surcharge is removed, the weight of a building will affect even greater settlements.

6. Detailed subsurface investigation

Text: page 20 last paragraph recommends a detailed subsurface investigation.

A distinction should be made between the investigation of a soils engineer and the much more thorough investigation done by a geologist. The latter type of investigation is essential.

7. Design techniques and investigation

Text: page 21, second paragraph. "...certain design techniques will be employed so that the proposed structure can withstand any liquefaction in the supporting soils."

What are these certain techniques? Is it absolutely certain that they will be successful in creating a structure which can withstand any liquefaction?

8. Chemical treatment of storm water runoff

Text: page 23, first paragraph says that the storm water runoff may be chemically treated.

Where will treatment occur? Will treatment endanger the area wildlife?

9. Solid waste of commercial facilities

Text: page 23, fourth paragraph. "Commercial facilities do not, of themselves, generate solid waste."

Any trip to a large shopping center on garbage pick up day would give evidence of large packing cartons and packing matter (from produce, shredded paper, etc) which are primarily related to the facility, rather than to the population served.

D-25

would not result in a level of competition with existing centers higher than acceptable under normal competitive standards."

Economist Randall Poudine, who testified before the Army Corps hearings, but who is not mentioned in this R.I.D., strongly questioned the validity of this statement.

17. Feasibility of a major regional shopping center

Text: page 18, first paragraph. "Further, the absence of a truly major regional shopping center with proximity to the project site..."

Incorrect. Northgate is only ten minutes away from Corte Madera.

18. Larkspur site

Text: page 41, fourth paragraph. "Consulting traffic engineers have recommended against the site..."

Which consulting traffic engineers have recommended against the Larkspur site?

19. Larkspur site proximity to freeway

Text: page 44, sixth paragraph. "The proposed location is neither adjacent to a freeway nor the railroad right-of-way."

The Larkspur location is very close although not adjacent to a freeway.

20. Corte Madera Creek channel at Larkspur site

Text: page 44, eighth paragraph. "This imposes a disadvantageous land fill requirement."

Why is it necessary that the channel be filled at this point? Isn't a bypass possible?

21. Original site proposal

Text: page 45, first paragraph says that the original site proposal "encompassed an area much larger than the current proposal..."

However, little difference exists between the initial and the present project in actual retail sales space.

22. Dual use of center parking lot

Text: page 50, second paragraph. "Other long term effects of the project include its convenient dual use as a regional shopping center and terminal parking area for any forthcoming transit system..."

Why Corte Madera residents would strongly object to this dual use.

23. Potential open space use of property

Text: page 50, fourth paragraph. "With regard to loss of open space, however, it may be recognized that the area is currently in private ownership, and that the property may in no way be regarded as permanent open space."

Why couldn't the property be regarded as potential open space provided that just compensation be given the private owner?

D-27

Brande Brown
February 6, 1974

10. San Francisco's solid waste problem

Text: page 21, third paragraph. "On a regional basis, San Francisco has perhaps the most acute solid waste disposal problems. The net impact of such local shifts in pressure on disposal areas will be significant and beneficial to San Francisco."

You assume that the reduction of solid waste will be more beneficial to San Francisco than the estimated loss of sales revenue? Couldn't an equally or indeed stronger argument be made for the retention of sales by San Francisco?

11. Figures showing export of sales from Marin to San Francisco

Text: page 24, fourth paragraph. "At present, 30% of potential regional center sales demand is being exported to San Francisco."

You're using figures in paragraph four as actual rather than as estimates. Subtraction error: "While 30%..." (should be 20%) "...of that market formerly exported will be returned to Marin County."

12. Visual impact of the new center

Text: page 21, fifth paragraph. "Visual analysis of the shopping center indicates that the proposed center...will have only minimal visual impact when viewed from surrounding areas..."

Have you seen the artist's rendition of the roofs of the center buildings? Viewed from surrounding hills, the shopping center will look like a giant parking lot.

13. The appearance of the area

Text: page 26, third paragraph. "The appearance of the entire area will be upgraded and continued maintenance insured."

Who will be responsible for upgrading the appearance and insuring the maintenance of the entire area?

14. Noise level and design of facility

Text: page 28, last paragraph. "Based on existing noise level standards, ...the western portion of the site would be unsuitable for office and most types of commercial development with an outward orientation."

If noise is indeed a factor determinant of design, wouldn't it be quite simple to design an office or educational facility with an inward orientation? Other commercial facilities in adjacent areas bordering the freeway are designed, some with inward and others with outward orientation.

15. Economic analysis predicting sufficient market for new center

Text: page 31, fourth paragraph. "An economic analysis, undertaken by Urban Projects, Inc., concludes that there will be sufficient market in 1975 to support the proposed regional shopping center..."

This is assuming the population will increase substantially and that purchasing power will remain constant or increase. However, with the water surcharges and population controls, the population may not grow enough to support both new and existing centers. Also, purchasers have found their purchasing power reduced by the high rate of inflation.

16. Competition between new and existing centers

Text: page 31, fourth paragraph. "The economic analysis further concludes that the introduction of a new regional shopping center in Corte Madera

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COMMENTS ON DRAFT E. I. R. D. S. ARMY ENGINEER DISTRICT, S.F. CORPS OF ENGINEERS ON RAHN SHOPPING CENTER PERMIT

Comments by R.V. Higgins
14 Council Crest Dr.
Corte Madera
Feb. 3, 1974

I am disappointed in the draft environmental impact report on the Rahn project prepared by the Army Corps of Engineers.

1 Much of the information and opinions contained in the report reads like a paraphrasing of the material contained in the Sedway Cooke E.I.R.

2. I do not share the confidence that the report indicates about the fill. Foundations are a problem on filled land in Corte Madera.

a- Recently about \$175,000 of the Corte Madera tax money has been appropriated to partially fix the sewer lines because of irregular subsidence costly in filled marsh lands.

b- The fill for the

c- The Condominium on Lucky Drive in Corte Madera was made under the direction of a Soil Engineer. After the condominiums were partially built (exterior walls and roof) the structure sank too fast and irregularly. The owners let the bond people take over the property. The latter had to support the building on steel I-beams. These in turn were supported on long piles driven into the ground. The fill on the highway side did not hold any better than the fill on the creek side as a corner on each side sank. Rahn's soil engineers think that the previously filled periphery will sink. This was not so for the Condominiums on the highway side.

d- A third floor resident at Rahn's Village in Corte Madera said there were several inches difference between the ceiling and the supporting post because of irregular sinking.

e- One recommendation for the Corte Madera said he had to fix his plaster over so often because of trucks passing by his house. His house is on filled ground.

f- Some houses on filled ground in Corte Madera are sinking faster than the street. As a consequence the rain water flowing on the street way flows toward the entrance instead of out.

D-28

LETTER D-24

Gurbing.

- f- In the Schultz subdivision next to Corte Madera one property owner has won a judgment against the developer because of bad subsidence. Others in the tract have filed suit.
- g- Very recently subsidence wrecked part of the underground plumbing in a tract of apartments in Larkspur, which is adjacent to Corte Madera.
- h- In the Hahn area the bedrock dips steeply. In the event of an earth quake, the whole mass could slide down the bedrock in a manner somewhat similar to the Seward/IN one section of Alaska. (Michael Frassker)

In Summary this all goes to show that the developer, contractor, and soil engineers have not licked nature, so as not to be a later expense to the owner of a building. The distance to bed rock in the Hahn area is deeper than in the above quoted areas. Also the previous Corte Madera Council granted a fill the height of which is 5 feet less than the 10 feet that was required for the previously mentioned Condominiums.

P.S. Any sales taken away from the present shopping center to the proposed Hahn Shopping Center will not result in a net gain to the city of Corte Madera.

Philip H. Higgins
KRM

D-29



COLLEGE OF MARIN

February 20, 1974

Colonel J. L. Lammie
District Engineer
Department of the Army
San Francisco District Corps of Engineers
100 McAllister Street
San Francisco, Ca 94102

Dear Colonel Lammie:

Re: Draft Environmental Impact Statement, Hahn Shopping Center, Permit Application, Marin County, California, prepared by U.S. Army Engineer District, San Francisco Corps of Engineers, January 1974

Thank you for the copy of the above draft for my review. I have read the impact statements prepared by your staff and have included my evaluation of the biological aspects below:

The report is lacking much supportive data and observations. When conclusive statements are made, data which will support such conclusions should be included in the report. Examples of such statements:

"The net biological productivity of some portions of Area B could be improved by the relocation of limited natural habitat areas now in the designated commercial site to an expanded natural habitat area along the Bay front." (p. 26)

"Further, the project...would be destroying highly productive marsh plants, ...etc." (p. 25)

"This area has a low habitat value rating." (p. 26)

"...marsh area supports one of the largest populations of native swallow-tail butterflies..." (p. 26)

of ponds...Due to the treatment it will receive before it enters the ponds, this runoff will have an adverse effect on the wildlife and wildlife habitat...The result will be water freed of oil, debris, and litter and having received better treatment than storm water runoff from the town of Corte Madera..." (p. 26)

There are many other conclusive statements which have no supportive data. Such reporting represents very poor science. In this light, I would hesitate to use any of these statements as valid judgment on the environmental impact of the Hahn project.

Consider another statement:

"Development of a regional center on the project site would destroy significant wildlife habitat..." (p. 50)

RECEIVED
CALIFORNIA STATE
FEB 21 1974

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LETTER D-13

1-7 1974

Will Valley, Ca.

Feb. 15, 1974

Col. J. L. Lammie

Dist. Engineer

Army Corps of Engineers

San Francisco, Ca.

Dear Col. Lammie:

Thank you for sending us a draft of the Environmental Impact Statement concerning the area of the proposed Hahn Shopping Center.

We have looked it over, and are even more opposed to any kind of

development there than we were last summer after attending your

meetings held in Corte Madera. We have many reasons for our opposition.

We will sight only two. (1.) "This condition signals a threat to

higher aquatic life." See page 22 of the Env. Impact Statement.

Fishing not only supplies vital protein and eases pressure on already overtrained land-based agriculture, it also employs large numbers of men and makes money. So it is most alarming that we are causing the death of our seas. See "The Death of Our Seas" by John McQuinn.

(2.) We do not need another shopping center in Marin County.

Sincerely yours,

Katy Strauss
Francis Strauss
Katy and Francis Strauss

D-30

LETTER D-12

This small sentence is a vital key to the whole project, and yet, there is no amplification nor supportive data on the meaning of "significant". How and to what extent is this wildlife habitat significant?

On page 25, first paragraph, E.P. Odum (I believe) is quoted on the yield per acre. If Odum is quoted as an authority, one could include his evaluation that an average acre of coastal marshland is valued at \$20,000 (Marine Resource Information Bulletin, February 4, 1974, Virginia Institute of Marine Science, p. 3). Thus, if 20.8 acres (your report, p. 25, 30) of Hahn saltmarsh are to be filled, then, according to Odum's evaluation, the Hahn project will cover \$2,900,000 worth of marsh property. This is a significant figure!

For such a critical development to our Marin County area I would have expected a more detailed environmental impact statement. In my opinion, no decision should be made at this time to either grant or deny the proposed Hahn Project because of lack of adequate information.

Sincerely,

Gordon L. Chan
Gordon L. Chan, Ph.D.
Director of Marine Technology Programs

GLC:ms

D-32

116 Walnut Avenue
Corte Madera, California
April 3, 1974

Corps of Engineers
U.S. Army Engineers District
100 Haight Street
San Francisco, California

Gentlemen:

I would like to offer a few comments on your Environmental Impact Report for the Mohn Shopping Center in Corte Madera:

1. The inference that the Mohn shopping center will cause a decrease in sales export to San Francisco is "wishful thinking" on someone's part. Commuters who work in San Francisco will continue to shop there during lunch hours as a most practical use of their time. Certainly Marin County cannot compete with the many attractions and cultural offerings of San Francisco that will continue to entice Marinites to that city for their own pleasure and to extend some to visiting tourist friends and relatives.
2. I have serious feelings regarding the filling of this marshland. The fact that Mr. Mohn has tried to assuage residents' fears regarding conflicting statements of Michael Fraser, and his own structural engineers regarding wetlands and the plan for filling this area, offers little consolation for someone who sells his interests in the development to others and walks away to bigger and better projects elsewhere.

I would certainly hope that if the fill permit is granted some means of affording protection to the residents of Corte Madera can be achieved. Is there some means by which the Corps can obtain a bond from the developer to insure that Corte Madera will not have to finance any off-site repairs required as a result of settlement, sinking or seismic occurrences that the developer assures the fill will withstand?

3. I certainly have serious reservations about the use of redevelopment funds for furthering the economic prosperity of private enterprises.
4. It seems completely idiotic to me not to expand and develop our existing shopping center, which would not involve any filling and certainly far less costs for utility service connections, etc.

There is certainly a moral issue involved as far as I'm concerned in weakening the sales revenues of the existing merchants who have served so long and well.

D-33

LETTER D-14

CRITICISM AND COMMENT
ENVIRONMENTAL IMPACT STATEMENT OF
U. S. ARMY ENGINEERS DISTRICT, SAN FRANCISCO
CORPS OF ENGINEERS
PROPOSED MOHN SHOPPING CENTER
FILL PERMIT APPLICATION
MARIN COUNTY, CALIFORNIA

William & Joann Gordon
30 Edison Avenue
Corte Madera, California
April 8, 1974

"An EIS statement must be objective" states the Public Resources Code for the Implementation of the California Environmental Quality Act.

We believe the Army Corps of Engineers violates this mandate by its almost total reliance on assumptions, opinions, predictions and some outdated information contained in the 1973 EIR produced by Sodney-Deake.

The Army Corps EIS bibliography is devoted almost exclusively to letters and reports from the developer and/or his agents. It is axiomatic that the opinions and statements of a developer must necessarily reflect the bias and self-interest of such developer and thus, are not objective.

The Sodney-Deake EIR was prepared under the direction of the then Mayor and Council of the Town of Corte Madera. An aroused electorate ousted these three officials in a recall election because it could not and would not accept either the redevelopment process or the presence of a regional shopping center on one of the last remaining marshlands in this area.

We substantiate this last statement by pointing out that of the 10 candidates who stood for the 3 seats of the recalled commission, 7 were vigorously opposed the Mohn project and approximately 75% of the votes cast. In the December 1974 special election, two of the 3 councilmen elected opposed the center. In the final (March 1974) election, the one councilman who supported the center was voted out, and was replaced by an opposition candidate. The Army Corps EIS takes only minimal notice of the overwhelming opposition to this project of the people of Corte Madera. Further:

1. Disregard of testimony by experts given at Army Corps Public Hearings.

We find no mention either in the EIS text or bibliography of several experts who questioned the Mohn project. For example: Dr. Gordon Chan, Director of Marine Biological Sciences, and

D-35

LETTER D-15

Corps of Engineers

April 3, 1974

With the Northgate shopping Center only 10 minutes away from Corte Madera and offering diversified department stores and small shops not available in Corte Madera, it is sheer nonsense to have another regional shopping center on the east side of our town. If I'm going to drive to the proposed regional shopping center I may as well go a bit further on into Terra Linda, and it will be far better from the standpoint of the over-all wear and tear and performance of my car's engine to drive for 10 miles or so at highway speeds to enable the engine to do a good job of "cleaning itself up."

Sincerely,

Barbara Gordon
Mrs. Barbara Gordon

his associate, Russell Ridge, both of College of Marin. We find this singular in view of the fact that Dr. Chan is a widely respected expert in the field of biological sciences. We forwarded several statements to the Army Corps in strong opposition to the shopping center.

2. Comments of the general public were excluded entirely from the EIS.

The California Court of Appeal has stated that where members of the public bring to the attention of the responsible agencies environmental impacts which they contend will result from proposed actions, the EIS should set out these contentions and opinions.

Public Resources Code Sec. 21000 states that every citizen has a responsibility to contribute to the preservation and enhancement of his environment.

3. Unsupported data, assumptions and predictions play too large a part in the Corps EIS, thus appearing to be a post hoc rationalization of a project which is, in effect, a "fait accompli".

Page 8 (of EIS) Par 4: "Designation of Corte Madera as a center for regional commercial facilities by AMAG regional plan and Marin County General Plan.

The people of Corte Madera are not obligated to accept desecration of priceless marshland in order to accommodate a regional shopping center at the behest of any regional agency. There is no evidence to prove the necessity for or benefits from a multiplicity of commercial centers. But undisputed evidence abounds in support of the preservation of a scarce and rapidly vanishing ecological commodity: our wetlands.

Page 3, Par 14: "My. 101.....constitutes a physical and social barrier between the two sections of Corte Madera....."

There is absolutely no evidence to support the contention of "social barriers" between East and West Corte Madera.

Page 14, Par 4: ".....Present DSTH sales generated by residents of Marin County are approximately \$180,180,000. However, the actual DSTH expenditures in 1970 in Marin were only \$108,000,000... indicating an export of DSTH sales of approximately \$46,000,000.

How did they determine the actual DSTH sales "generated" by residents of Marin? How can it be determined which portion of Marin County sales are made by residents and how much by visitors?

It does not necessarily follow that money now being spent in San Francisco will be spent in the proposed Mohn Shopping Center. Commuters employed in San Francisco shop during lunch hours and after

D-36

"They have established shopping patterns which will probably persist. It is estimated that it takes about 5 years to establish a buying habit. Much money is spent by persons who are drawn to Marin County by its many varied attractions and opportunities in diversified entertainment not available in Marin County. These persons go to San Francisco to get away from Marin. Their decision is not related to convenience of choice of shops available here."

Page 18, Par 5: "From a land use point of view, a high quality commercial shopping center or other commercial use would be compatible with nearby land use and would act as a buffer to the land east of the present railroad right-of-way."

Hahn anticipates auto traffic to increase to 35,000 cars per day, having to and from a 45-acre cluster of shops and a huge parking lot. He in his right mind would call this kind of project a "buffer".

Page 20, Par 1: ".....many Bay fill projects which have been carried out using these techniques to control rate of settlement have been performed satisfactorily."

But the courts in Marin County will show that there are quite pending because houses and apartments built in the Greenbrae-Larkspur area as well as condominiums on Lucky Drive are sinking. In addition, the Marin Town & Country Shopping Center which was built on fill in the 1950's is sinking and flooding.

Eugene Nelson, principal geologist for the Earth Sciences Associates of Palo Alto, in a report made to Rodney-Cooke said as follows:

"The requirement for a well coordinated technical plan for development of the baylands at Corte Madera suggests that the formation of a special agency or district with adequate resources, including 'front-end' funds for necessary feasibility studies and planning, staff expertise, and possibly a board of special consultants, would be necessary for the proposed project. Even at that, there would be some risk that the project could prove to be infeasible if preliminary studies indicated that all or part of the area was underlain by substantially unstable soil deposits. The probability of this occurring would be even greater if an attempt were made to follow an inflexible plan which does not consider the technical problems, and which permits development of parcels of land without overall technical coordination."

Mr. Nelson is among those whose name does not appear in the Army Corps EIS.

Page 21, Par 1: "There should be no real seismic hazard in connection with the proposed project because the period of time of the proposed structures will be short in relation to the extremely long period of vibration of the underlying material (bay mud)."

See Page 19 for statement of Michael Frassker of Lee and Frassker.

D-37

Page 31, Par 4: ".....a new regional shopping center in Corte Madera would not result in a level of competition with existing centers higher than acceptable under normal competitive standards."

Randall Fosden, an economics expert whose written opinions are in Army Corps' files but who is not quoted or referred to in the subject EIS, disputes this assumption. He says ".....while additional revenues may benefit Corte Madera, these benefits will be drawn from other areas of the region to the detriment of those areas."

It appears to us that the exclusion of Mr. Fosden's written and spoken testimony from the EIS reflects an obvious bias on the part of the Corps in favor of the developer and constitutes a serious breach of public trust by a governmental body charged with producing an objective document, not a supporting statement of the developer's project.

Page 34, Par 1: ".....all of Marin has been defined as the market area for purposes of this study. Further, the absence of a truly major regional shopping center with proximity to the project site....."

The first statement is not in keeping with the shopping center industry's normal method of considering an area of 10 to 15 minutes drive as a market area.

The second statement ignores the Northgate Mall. By any measurement in the shopping center field, this 45-acre center with large, full-line Sears and Roebuck stores would be considered a regional center. In fact, the proposed Hahn center would also be a 45-acre site. Thus, if the size of Northgate, in Hahn's judgment disqualifies it from being a regional center, then the same yardstick must be equally applied to his project. In addition, the driving time from the center of Corte Madera to the Northgate Mall is but 8 1/2 minutes. This certainly indicates an excellent degree of proximity to the proposed new site.

Page 34, Par 2: "The apparel and department stores found in the central area of San Rafael already serve a somewhat limited market and do not and will not directly compete with a major regional shopping center."

San Rafael is presently engaged in the redevelopment process which will bring about a refurbished downtown shopping area. Mr. Hahn's project will most certainly take money from that town.

Page 34, Par 3: ".....Northgate Mall is located approximately 7 miles north of the proposed regional shopping center, and therefore serves a somewhat different and separate trade area."

The Mall's surveys show that 15% of their shoppers come from south of San Rafael and are not "different and separate."

D-19

who warns that the EIS does not go into sufficient detail as to what would happen should an earthquake strike. The damage to buildings created by bay mud with fill must absorb it is subject to breaching up taking with it the streets, sewers and buildings due to enormous ground displacement.

Page 23, Par 4: "Commercial facilities do not of themselves generate solid waste."

Perhaps Army Corps could spare one of its personnel to make a field survey to any large shopping center and view the large and various kinds of waste stacked up on pickup day - nearly all of it a part of the operations of the center.

Page 27, Par 5: "Visual analysis of the shopping center indicates that the proposed center will have only minimal visual impact when viewed from the surrounding areas."

Most of the homes in Corte Madera are built on various elevations and a great many are on steep hills overlooking a low-lying marsh. Although the developer has not provided us with a realistic scale model of his proposed project, we have seen the artist's sketch of the buildings. Viewed from most areas in Corte Madera, particularly hilltops, the project promises to be a hideous sight.

Page 28, Par 1: "The net biological productivity of some portions of land is improved by the relocation of limited natural habitat areas now in the designated commercial site to an expanded natural habitat area along the Bay front."

Madrone Associates have stated that the proposed shopping center will eliminate the existing abundant wild life. There is no certainty that wild life can be relocated or that salt marsh plants can successfully be reestablished. In addition, Madrone Associates completed their biological assessment in 1974. Dr. Gordon Chan told us that at least ONE YEAR is necessary to carry out a valid and proper study because seasonal variations must be taken into account.

Page 31, Par 4: "An economic analysis by Urban Projects concludes that there will be sufficient market in 1975 to support the proposed regional shopping center in Corte Madera."

Rampant inflation and soaring costs of even what used to be considered the simple, basic foods, fuel and services will almost certainly devour most of the consumer's rapidly depreciating dollar. There will be very little remaining to take to shopping centers. Most of us are having to pare luxuries from our budgets entirely. Our life styles are undergoing enormous changes. Salvation Army boutiques abound with customers stepping out of Mercedes Benzes.

D-38

Page 44, Par 2: (refers to the Larkspur site for a shopping center) and states "This imposes a disadvantageous land fill requirement."

We have been told by a member of the Army Corps that no fill is required at the Larkspur site. It is already filled, and any development there requires no permit from the Corps.

There is an alternative to destruction of valuable marshland for the purposes of the developer. The present Corte Madera Center can be remodelled, enlarged and enhanced. The present owners wish to embark on such a program and the people of Corte Madera support and encourage such a plan. This center is only about 18 years old and can be made attractive. It can serve our needs.

It might be added here that although a majority of the merchants in the present center are extremely fearful of any new shopping facilities of the size proposed and so informed the Board of Supervisors with copies of their letters forwarded to the Army Corps, none of this has been taken into account. These merchants (18) do not believe the Hahn center would strengthen anything for them, despite Hahn's optimistic contentions.

The Audubon Society summarizes the situation explicitly and well in its report: "In view of the adverse environmental effects and the necessary encroachment on the marsh, the project is totally unacceptable from an ecological standpoint."

In bringing our comments to a close, we would call to your attention the compelling statements made only a few weeks ago by Michigan's Congressman John Dingell. Mr. Dingell roundly criticized governmental agencies for their failure to do the job of protecting our environment. The Army Corps is most certainly one of the offenders. While publicly proclaiming their stewardship over our wetlands and clamoring for more power to "protect" our priceless shorelands from the depredations of developers for private profit, the subject EIS reveals their essential bias in favor of such destruction.

The people of Corte Madera will not tolerate destruction of this marsh, one of the few remaining. We know that the proposed Hahn project will secure profits solely to the developer who will move on to another desecration elsewhere.

cc: Congressman John Dingell
Jenn Tunney
Senator Peter Behr

D-40

Col. J. L. Lammie
District Engineer
Department of the Army
San Francisco District, Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Col. Lammie:

At their regular adjourned meeting of February 11, 1974, the Corte Madera Town Council held a hearing on the Corps of Engineers Environmental Impact Report on the Hahn Shopping Center. Following are their comments:

Please provide actual sources for all basic assumptions, particularly economic factors, traffic generated, revenue sources and costs to the Town of Corte Madera associated with the project, particularly as it relates to the project as presently proposed.

- Page 1** - Update last sentence in second paragraph.
- Page 2** - Last sentence in 4th paragraph should be changed to read, "Such of these plans also proposes the Corte Madera-Larkspur area as a regional activity center."
- Page 3** - Fourth sentence in second paragraph, delete the word "exit".
- Page 4** - Last sentence in the first paragraph, delete the words, "The Town and the."
- Page 5** - Sixth paragraph - North Municipal Water District wastewater needs to be mentioned.
- Page 10** - Fourth paragraph should be changed to read as follows: "The immediate project site is highly visible from adjoining areas. The land, previously zoned for light industrial development is currently undeveloped, idle property that is marked by some dilapidated buildings, trash and debris."
- Page 11** - First paragraph - still applicable in view of energy crisis putting off various requirements?
- Page 12** - Last two words of first sentence in last paragraph should be "below capacity."
- Page 13** - First sentence in - This is an untested and unproven assumption.
- Page 14** - First paragraph - Questions of accuracy of this information. Amplify section on geology and soils so that the information can be related to this application and its intended construction methods.
- Page 15** - First paragraph - This paragraph is incomplete and needs additional explanation.
- Page 22** - Last paragraph - This paragraph is not clear and needs to be rewritten.
- Page 24** - Third sentence, 4th paragraph - Check figure on Vol in same sentence.
- Page 25** - Last sentence, 4th paragraph - Final draft to include verification by 1974.
- Page 27** - Last paragraph - This is not true.
- Page 28** - Third paragraph - Clarify. Fourth paragraph - This paragraph does not reflect present plans of USRA & T District. Fifth paragraph, 2nd sentence - location the word "immediately".
- Page 29** - First paragraph - Where are any alternatives? Sixth paragraph - This use of railroad site is in conflict with our proposed General Plan. Seventh paragraph - Questions source of information. First paragraph - should reflect on current source criteria to be taken into account. Sources or tracks for report of rail may be addressed.

- Page 31** - First paragraph - Question statement in third sentence.
- Page 31** - First paragraph - Put in mileage between proposed Hahn Center and Northside Center.
- Page 36** - Second paragraph - San Rafael's proposed redevelopment project may have an impact.
- Page 37** - Fifth paragraph, second sentence - Incorrect statement?
- Page 38** - Second sentence in second paragraph - More information needed. Second sentence in last paragraph - How related? Is information current? What is traffic situation without Williams Ave?
- Page 39** - Eleventh sentence, second paragraph, seventh sentence - Corps should be treating this as an impact and not just as an unresolved problem.
- Page 40** - Third sentence, third paragraph - Analysis on current plan showing that this statement is true and consider alternatives.
- Page 41** - Fifth paragraph - Mitigating measures on traffic have not been completed.
- Page 42** - Sixth paragraph - Discuss all alternative uses of the area.
- Page 43** - Fourth sentence, sixth paragraph - Document statement.
- Page 44** - Third sentence, fourth paragraph - Source of information?
- Page 45** - First sentence, first paragraph - Assumes interchange.

- Page 47** - First sentence, fourth paragraph - Clarify.
- Page 50** - First sentence, second paragraph - Is not current on present application. Second sentence, second paragraph - Source of projection?

Very truly yours,

Herbert C. Leary
Mayor

NC:bb

D-41

LETTER D-16

D-42

TOWN OF CORTE MADERA
TOWN HALL
CORTE MADERA, CALIFORNIA 94925



August 2, 1974

August 2, 1974
Page 2

Should there be any way in which we can be of further assistance, please do not hesitate to contact us.

Yours very truly,

Joe Becker
Joe Becker, Chairman
Financial Committee
Town of Corte Madera
6 Council Crest Drive
Corte Madera, California 94925

LH:p

cc: Mr. Tom Crowe
Colonel Rex Schlegel
Mr. Ross J. Lamm
Mr. Brian Janny, Council of Environmental Quality

Colonel J. L. Lammie
Department of the Army
San Francisco District
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Dear Colonel Lammie:

In our recent correspondence to you dated July 23, 1974, (copy attached), we asked for information as to the primary and secondary sources of financial data furnished in your Environmental Impact Study on the proposed Hahn Shopping Center in Corte Madera, California.

In a telephone conversation on July 30, 1974, Mr. Tom Crowe of your office replied to our request. The basic understanding of our conversation is attached in a letter dated August 2, 1974. Briefly, it was that the financial consulting firm, Urban Projects, Inc., is the primary and most probably the entire source of financial data for the Environmental Impact Study.

Attached herein is also a copy of a letter for your inspection of Full Disclosure dated June 13, 1972, from Urban Projects, Inc. as to the business relationship between Urban Projects, Inc. and its Principals, and Ernest W. Hahn, Inc., its officers and employees.

Since it is possible that the Army Corps of Engineers has been fully aware of the financial relationships between the above mentioned parties as described in the attached Full Disclosure letter, we would like to recommend that such copy of the Full Disclosure letter be included in the final draft of the Environmental Impact Study. If, on the other hand, the Army Corps of Engineers has been unaware of the financial and business relationships of the above parties, we are submitting the attached material for evaluation in the preparation of your Study.

(Continued)

D-43

LETTER D-17

D-44

Urban Projects, Inc.
 1000 N. 10TH ST. SUITE 100, CORTE MADERA, CALIF. 94028
 (415) 435-1000

RECEIVED
 JUN 15 1972

June 13, 1972

TOWN OF CORTE MADERA

Mr. Ronald E. Bartels
 Town Manager
 Town Hall
 Corte Madera, California

Subject: Full disclosure of the business relationship between Urban Projects, Inc., and its Principals, and Ernest W. Hahn, Inc., its officers and employees.

Dear Mr. Bartels:

In response to your and Mr. Bianchi's request that we describe the business relations between Urban Projects, Inc. (and its principals) and Ernest W. Hahn, Inc., the following information is submitted:

UPI is currently actively involved in two shopping center developments with Ernest W. Hahn, Inc., and expect to be involved on some basis, in a third, as follows:

Santa Anita Fashion Park: A three department store shopping center being developed in Anacosta, California on land owned by Santa Anita Consolidated, Inc. UPI's principals, William H. Bryant, E.L. Noxon and Richard Botti, are limited partners in a limited partnership, Joint Venture Agreement in which Ernest W. Hahn, Inc. is the general and controlling partner. That limited Partnership, in turn, is the General Partner of a second limited Partnership, Joint Venture agreement in which Santa Anita Consolidated, Inc., is the limited Partner.

Interest in those partnership agreements are as follows: Anita Associates - A Joint Venture between Santa Anita Consolidated, Inc., as limited partner, and Hahn Associates as General Partner. Santa Anita Consolidated, Inc. - 50% interest. Hahn Associates, 50%.

Hahn Associates: A Joint Venture between E.W. Hahn, Inc. and Urban Projects, Inc. (UPI). This limited partnership acts as the General Partner to Anita Associates. Ernest W. Hahn, Inc. - 75%, Bryant, Noxon and Botti - total 25%. The latter figure of 25% is equivalent to 12 1/2% of the ownership of the developing/limited Joint Venture. All of the legal documentation providing for the above is fully executed and recorded.

Urban Projects, Inc. is not involved in the development process in any way in

D-45

FORMERLY KNOWN AS THE DEVELOPMENT OF REAL ESTATE

Mr. Ronald E. Bartels
 Corte Madera

June 13, 1972

Page 3

its officers or employees in any other project or activity. As individuals and as a corporation, we own no stock in Ernest W. Hahn, Inc. nor in any project or activity in which that firm has an interest. Similarly, Ernest W. Hahn, Inc., nor any of its officers or employees does not own any stock in Urban Projects, Inc. nor have an interest of any kind in any project in which we as individuals or as a corporation have an interest beyond those disclosed above.

There is a reasonable expectation, however, that our respective organizations will at some future time become involved in other projects on a joint venture basis similar to those described above because of the basic compatibility of our respective organizations (i.e., our ability to find, qualify and put together the basic elements of commercial project and Hahn Inc.'s reputation, financial strength and organizational depth in the required day-to-day development activities). Such involvement, however, is anticipated to be only on individual projects with all financial relations and involvements resulting therefrom being totally on an arms-length basis as has been the case to date.

Yours truly,

URBAN PROJECTS, INC.

William M. Bryant
 President

cc: Albert Bianchi

D-47

Mr. Ronald E. Bartels
 Corte Madera

June 13, 1972

Page 2

that we have no responsibilities, no obligations to perform nor any decision-making and/or veto powers. That is, our position is as equity owners only.

Hawthorne Plaza: A three department store, regional shopping center project plus ancillary commercial facilities and office space now being developed in the City of Hawthorne, Redevelopment Project #1.

The legal documentation for this project is only in the drafting stage. It is contemplated, however, that a limited partnership-Joint Venture composed of Ernest W. Hahn, Inc., - General Partner - 50%, Broadway-Hale, Inc. Limited Partner - 30% and Urban Projects, Inc. 20%, will be formed. This limited partnership will purchase land from the Hawthorne Community Redevelopment Agency and develop the project in accordance with plans now being prepared under the joint auspices of the Joint Venture and the Agency. Further, Urban Projects, Inc. is designated as the Joint Venture's representative in the day to day workings with the Agency, its staff and consultants for which activity the UPI will receive payment in the form of development fees from the Joint Venture.

Proposed Santa Rosa Downtown Redevelopment Project: This project is proposed to be a three department store, enclosed mall, downtown shopping center.

Our position and/or interest is as follows. Based on a verbal agreement between Ernest W. Hahn and Bryant and Noxon of UPI to the effect that if we invested our time in investigating the merit, etc. of potential or prospective redevelopment type projects which come to the attention of Hahn, Inc., Hahn would fund the travel expenses involved and, if the project came to fruition, an appropriate equity/development fee position, presumably along the lines of the Hawthorne project, would later be worked out on a basis equitable to all concerned.

With respect to Santa Rosa, the undersigned had an initial exploratory meeting with Santa Rosa officials which provided the basis for another meeting (attended also by Hahn, Inc. officers) and a subsequent agreement between Hahn, Inc. and the Santa Rosa Urban Renewal Agency under which Hahn is developing plans and obtaining department store interest. We are not involved in current planning activity but expect that we will again become involved pursuant to our verbal agreement with Ernest W. Hahn.

A situation involving the San Francisco Urban Renewal Agency's Fillmore Project and its developers was similarly explored by E.L. Noxon but, on the basis of our negative recommendations, was dropped by Hahn, Inc.

Beyond the above, we have had no further involvement with Ernest W. Hahn, Inc.,

D-46

western union

Telegram

SFC 535 STD358 (1905) (2-943 140259) PD 09/16/74 1905
 ICS 1PHRMZC CSP

2135423614 M. TREN TORRANCE CA 333 09-16 0705F EDT

PHS COLONEL NA FLEETZHEIM JR, JR

DISTRICT ENGINEER DEPARTMENT OF THE ARMY SAN FRANCISCO DISTRICT
 CORP OF ENGINEERS 100 MCALLISTER ST
 SAN FRANCISCO CA 94102

REGARDING ERNEST W. HAHN INC APPLICATION FOR FILL PERMIT PUBLIC
 NOTICE 73-04 (A) OF APRIL 13 1973 THE APPLICANT OBJECTS TO THE
 INCLUSION OF THE RECENT LETTERS FROM THE TOWN OF CORTE MADERA
 IN THE CORPS DECISION MAKING PROCESS AS NOT BEING RELEVANT
 OR MATERIAL TO THE ISSUE BEFORE THE CORP; NOT SUBMITTED IN A
 TIMELY MANNER AND IN ACCORDANCE WITH THE CORPS PROCEDURAL PROCESSES
 FOR THE SUBMISSION OF EVIDENCE AND COMMENTS
 AS WE UNDERSTAND THE FEDERAL POLICY GUIDELINES, THE CORPS DECISION
 IS TO BE PREDICATED UPON A "BALANCING OF THE PUBLICS INTERESTS".

THE UNDISPUTED FACT IN THE CORPS PUBLIC RECORD IS THAT ALL OF
 THE PEOPLE OF MARIN COUNTY ARE EFFECTED THAT IS THE PUBLIC WHOSE
 INTEREST THE CORP IS TO AND SHOULD CONSIDER-SOME QUARTER MILLION
 PEOPLE FURTHER WITH RESPECT TO THE CITIZENS OF CORTE MADERA
 YOUR ATTENTION IS DIRECTED TO THE RECORD OF PUBLIC HEARING HELD
 BY THE CORP OF ENGINEERS THAT IN THE ONLY PUBLIC OPINION POLL
 EVER TAKEN IN CORTE MADERA THAT THE PEOPLE OF CORTE MADERA BY
 A MAJORITY FAVORED AND VOTED FOR THE BUILDING OF THE HAHN REGIONAL
 SHOPPING CENTER

THE PRESENT CITY COUNCIL LETTER OF SEPTEMBER 5 1974 IS NOT ONE
 OF EVEN EXPRESSED OPPOSITION BUT A SIMPLE STATEMENT THAT ITS
 (THE PRESENT TOWN COUNCIL) HAS NOT COMPLETED ITS STUDIES NOR
 EVEN INDICATED WHEN THAT WOULD OCCUR THEREFORE THAT LETTER CONTAINS
 NO STATEMENT OF FACTS WHICH CAN OR SHOULD EFFECT THE CORPS DECISION

D-48

LETTER D-18

MAKING PROCESS THERE IS NO WAY FOR THE CORP TO SPECULATE ON WHAT THE PRESENT COUNCIL MIGHT DO OR EVEN IF THE PRESENT COUNCIL WILL REMAIN AS PRESENTLY CONSTITUTED

IN SUMMARY WE RESPECTFULLY SUBMIT THAT THE FEDERAL POLICY GUIDELINES ARE THE BASIS OF MATERIAL AND RELEVANT EVIDENCE AS INTRODUCED ARE AND SHOULD BE THE ONLY CONTROLLING FACTORS OF WHETHER TO ACCEPT OR REJECT APPLICANTS FILL PERMIT ESPECIALLY IN VIEW OF THE CORPS CONCERN WITH RESPECT TO A PENDING FILL PERMIT APPLICATION ON CONTIGUOUS PROPERTY

ERNEST W. HAHN INC BY ERNEST W. HAHN CHAIRMAN OF THE BOARD

WUW

10-10-74



Telegram

SFD146 SFAA44(1840)12-0424282403PD 09/17/74 1840
ICS IPHNC2 CSP
2133703962 TMM TORRANCE CA 426 09-17 0640P EDT
PMS COLONEL H A FLERTSHEIM JR, DLR DISTRICT ENGINEER DEPT OF THE ARMY, DLR
100 MCALLISTER ST SAN FRANCISCO DISTRICT CORP OF ENGINEERS SAN FRANCISCO CA 94102
SUPPLEMENT TO TELEGRAM OF SEPTEMBER 14 1974 RE ERNEST W HAHN INC APPLICATION FOR FILL PERMIT-PUBLIC NOTICE 73-24(A) OF APRIL 13 1973. APPLICANT HEREBY SUPPLEMENTS ITS TELEGRAM HERETOFORE TRANSMITTED TO YOU CONCERNING THE APPLICANTS OBJECTIONS TO THE INCLUSION OF THE RECENT LETTER FROM THE TOWN OF CORTE MADERA IN THE CORPS DECISION MAKING PROCESS CONCERNING APPLICANTS FILL PERMIT APPLICATION.

IT IS RESPECTFULLY SUBMITTED THAT CALIFORNIA LAW AS PRONOUNCED BY THE COURTS REQUIRES A FAIR AND IMPARTIAL HEARING BY LOCAL



Telegram

GOVERNMENTAL AGENCIES IN MATTERS SUCH AS THE ONE AT ISSUE. THE COURTS HAVE VOIDED LOCAL AGENCY ACTIONS WHERE BIAS AND PREJUDICE EXISTS. THE APPLICANT DIRECTS YOUR ATTENTION TO THE CASE OF SAKS AND CO, VS. CITY OF BEVERLY HILLS, 107 C.A. 2D 260 (1951), WHERE THE COURT OF APPEALS OF THIS STATE FOUND THAT AN APPLICANT FOR A VARIANCE FOR A PARKING LOT IN A RESIDENTIAL AREA, COULD NOT HAVE NOW DID IT RECEIVE A FAIR AND IMPARTIAL HEARING BY MEMBERS OF A CITY COUNCIL WHO HAD COMMITTED THEMSELVES DURING AN ELECTION CAMPAIGN AND HAD BEEN ELECTED ON A PLATFORM DEDICATED TO A REVOCATION OF THE VARIANCE. THE EXISTING CITY COUNCIL IN THE TOWN OF CORTE MADERA IS COMPRISED OF A MAJORITY OF MEMBERS WHOSE ELECTION PLATFORM WERE SOLELY THEIR EXPRESSED INTENTION TO PROHIBIT THE DEVELOPMENT OF THE SHOPPING CENTER PROPOSED

D-50 LETTER D-14

LAW OFFICES OF
BARRETT STEARNS COLLINS GLEASON & KINNEY
ATTORNEYS AT LAW

October 9, 1974

JOHN L. BARRETT
JOHN L. STEARNS
ROBERT E. COLLINS
MICHAEL E. GLEASON
JAMES E. KINNEY
BARRETT & STEARNS
ATTORNEYS AT LAW
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94102

Department of the Army
San Francisco District,
Corps of Engineers
100 McAllister Street
San Francisco, California 94102

Attention: Colonel H. A. Flertsheim, Jr.

Re: Ernest W. Hahn, Inc. - Application for
Fill Permit - Public Notice 73-24(a)

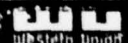
Dear Colonel Flertsheim:

Request is hereby made that you include in the final Environmental Impact Statement presently under preparation by your office for the Hahn Shopping Center Regulatory Permit Application, Corte Madera, Marin County, California, all of the matters, information and findings from the EIS which you have recently completed with respect to the fill permit application of the Golden Gate Bridge Highway and Transportation District for the San Francisco Ferry Terminal located in the County of Marin, City of Larkspur, California.

We have been advised that the Golden Gate Bridge Highway and Transportation District was granted a fill permit by the Department of the Army on October 1, 1974. We also hereby request that the permit granted the Golden Gate Bridge Highway and Transportation District also be included within the Hahn final Environmental Impact Statement together with any and all other material which is relevant to the Hahn site and which is contained outside of the EIS but which is contained within the file in connection with the fill permit application of the Golden Gate Bridge Highway and Transportation District.

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LETTER D-20



Telegram

APPLICANTS PROPOSITION THAT THE CURRENT CITY COUNCIL IN THE TOWN OF CORTE MADERA, AND MORE PARTICULARLY THE RECENT LETTERS FROM THE TOWN OF CORTE MADERA TO THE CORPS OF ENGINEERS ARE THE DIRECT RESULT OF ACTIONS OF THOSE MEMBERS OF THE CITY COUNCIL WHO WERE ELECTED ON THE EXPRESS DEDICATION AND PROMISE TO DENY THE DEVELOPMENT OF THE PROPOSED SHOPPING CENTER, AND THEREFORE, THE SAKS CASE DIRECTLY APPLIES. THE BIAS AND PREJUDICE OF THE SAID MEMBERS SHOULD BE REJECTED BY THE CORPS OF ENGINEERS IN AN AFFIRMATION OF APPLICABLE CALIFORNIA LAW.

YOUR ATTENTION IS ALSO DIRECTED TO THE FACT THAT AT THE TIME OF THE APPLICATION FOR THE FILL PERMIT, THE CITY COUNCIL OF THE TOWN OF CORTE MADERA HAD APPROVED THE APPLICANTS GENERAL PLAN. APPLICANT REQUESTS THAT THE CORPS OF ENGINEERS FOLLOW THE CALIFORNIA LAW BY REJECTING AN ILLEGAL ATTEMPT BY THE MAJORITY



Telegram

OF THE MEMBERS OF THE CURRENT CITY COUNCIL WHO, AS A MATTER OF LAW, ARE BIASED AND PREJUDICED AGAINST THIS PROJECT AND ARE SEEKING INDIRECTLY TO PROHIBIT THE DEVELOPMENT OF THE SHOPPING CENTER WHICH THEY CAN NOT OTHERWISE ACCOMPLISH DIRECTLY

JAMES L. BARRETT BARRETT STEARNS COLLINS GLEASON AND KINNEY
21515 HAWTHORNE BLVD SUITE 1150 UNION BANK TOWER TORRANCE CA 90503

WUW

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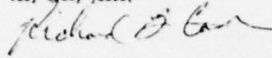
Department of the Army
San Francisco District,
Corps of Engineers
October 9, 1974
Page Two

We feel that the granting of the aforementioned permit is materially relevant and of a precedent setting nature with respect to most of the environmental questions which have been raised concerning the Hahn fill permit application.

Will you kindly also supply this office with a copy of the final EIS prepared by your office for the Golden Gate Bridge Highway and Transportation District, or, in the alternative, advise us to where we can obtain a copy thereof.

Thank you for your courtesy and cooperation in this matter.

Very truly yours,



RICHARD B. COLLINS

RBC:mb

cc: Ernest W. Hahn
James L. Barrett

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Comment by: Marin Conservation League
Brenda Brown
Barbara Garcia

Comment: Opposed to developing a new area with redevelopment money.

Response: Clarification on use of redevelopment money has been covered in Paragraph 1.12.

Comment by: The Resources Agency of California

Comment: Statements on nature and method of placement of fill seem contradictory or at least inconclusive.

Response: Paragraphs 1.25-1.29 have been revised to clarify the method of fill.

Comment by: Brenda Brown

Comment: Where will treatment occur?

Response: The treatment of storm drainage is discussed in Paragraph 1.33.

Comment by: Brenda Brown

Comment: What design techniques will be employed so that the proposed structure can withstand any liquefaction?

Response: These techniques are discussed in Paragraph 1.36. Economic concerns.

Comment by: Marin Conservation League

Comment: The statement that all of Marin has been defined as the market area for the purposes of the study is not in keeping with the shopping center industry's normal method of considering an area of 10 to 15 minutes drive as a market area.

Response: The market area for the proposed center has been redefined in Paragraphs 2.20-2.22.

Comment by: William & JoAnn Gordon

Comment: Northgate Mall surveys show that 1% of their shoppers come from south of San Rafael and are not "different and separate."

COMMENTS AND RESPONSES CONCERNING THE DRAFT ENVIRONMENTAL STATEMENT

Comment: The questions and issues raised in the Draft Environmental Statement are summarized and responded to in this section. These comprise parallel those issues raised at the Corps Public Hearing. Many of the reviewers raised the same or very similar points, which have been responded to collectively. For ease in reference to pertinent parts of this report, the questions and issues generally follow the topical outline of this report.

If the comment requires a change in the main text of this Statement, the paragraph changed is referenced in the response.

Copies of all correspondence from agencies, groups and individuals received in response to the Draft Environmental Statement are found in Appendix D.

Concerns related to project description

Comment by: Council on Environmental Quality

Comment: A description of the overall development project is required. A description of the nature of the redevelopment and any Federal involvement is it would be useful.

Response: The redevelopment project, except for the regional center, is for planning purposes only and no other construction if completed. There are no Federal funds involved at this time. These facts have been further amplified in Paragraphs 1.11 and 1.12.

Comment by: Brenda Brown

Comment: Little difference exists between the initial and the present project in actual retail space.

Response: The gross leasable area has been reduced by 12% from the initial proposal. The total acreage involved has been reduced 34%, the amount of fill by 50%, the number of parking spaces by 18%, and the number of major department stores has been reduced by 25%.

Comment by: Town of Corte Madera
Brenda Brown
William & JoAnn Gordon

Comment: What happened in the December 1973 recall election?

Response: Paragraph 1.13 has been updated to include the results of the recall and subsequent elections of new Town Council members.

*As presented in the Proposed FEIS.

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Response: As indicated on Plate 4 there is some overlapping of the trade areas for Northgate and the proposed center, however, these two centers would primarily serve separate areas within Marin County (Paragraph 2.22).

Comment by: Brenda Brown
William & JoAnn Gordon
Barbara Garcia

Comment: Commuters who work in San Francisco will continue to shop there during lunch hours as a most practical use of their time. Certainly Marin County cannot compete with the many attractions and cultural offerings of San Francisco that will continue to entice Marinites to that City for their own pleasure.

Response: As discussed in Paragraph 2.11 it is expected that the net Department Store Type Merchandise (DSTM) export can be reduced by 65% with the introduction of new modern facilities in Marin County. This leaves approximately 35% of the present DSTM export to San Francisco. It may be true that Marin County cannot compete with the many attractions and cultural offerings of San Francisco; however, the DSTM sales returned to Marin County are not concerned with these offerings.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: The statement that there is an absence of a truly major center with proximity to the project site is incorrect as Northgate is only ten minutes from Corte Madera.

Response: The market area for the proposed center has been redefined in Paragraphs 2.20-2.22. While Northgate Mall and the proposed site are approximately ten minutes apart, each center will serve essentially separate trade areas.

Comment by: Town of Corte Madera

Comment: Include alliage between proposed center and Northgate.

Response: The distance is approximately seven miles. This information is included in Paragraph 4.09.

Comment by: William & JoAnn Gordon

Comment: How were DSTM sales of \$150,120,000 generated by residents of Marin County? How can it be determined which portion of Marin County sales are made by residents and how much by visitors?

D-56

D-55

Response: The DSTM sales of \$150,120,000 was the total DSTM potential for Marin County. Total DSTM potential is derived by multiplying estimated per capita expenditures by the projected population of the trade area. The DSTM expenditures are not divided into resident sales and visitor sales. By comparing the sales potential of an area with the actual sales in that area, an estimate can be made of the amount of sales "exported" out of the area. Paragraph 2.09 has been revised to include this explanation.

Comment by: Town of Corte Madera

Comment: The economic viability of Corte Madera Center is questioned.

Response: The Corte Madera Center is discussed in Paragraph 2.13-2.15.

Comment by: Brenda Brown
William & JoAnn Gordon
Barbara Garcia

Comment: The present Corte Madera Center can be remodelled, enlarged, and enhanced, and would not involve filling.

Response: The proposed plan for the expansion of the Corte Madera Shopping Center has been discussed in Paragraph 2.13-2.15.

Comment by: Marin Conservation League

Comment: The economic viability of the proposed center and its probable adverse effect on the existing Corte Madera Shopping Center is questioned.

Response: The economic viability of the proposed center has been discussed in Paragraphs 2.13-2.14 and its effect on the existing Corte Madera Center has been discussed in Paragraphs 4.05-4.08.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: Economist Randall Fardena strongly questioned the validity of the statement that the introduction of a new regional center in Corte Madera would not result in a level of competition with existing centers higher than acceptable under normal competitive standards.

Response: The introduction of a new regional center in Marin County is based on the present and projected need for the additional retail facilities rather than simply taking present sales away from the existing market.

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Response: The economic analysis is presented in Paragraphs 2.15-2.16. From this analysis Corte Madera would gain a net amount of \$250,000 from sales tax the second year after the center begins development. School districts do not benefit from sales tax revenues (property tax only).

Land use concerns.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: How can a shopping center with its resultant increase in traffic be considered a buffer to the adjacent area?

Response: The original plan for the development of the project site called for a recreation area east of the shopping center. A here would have screened U.S. 101 from this recreation area, hence the buffer effect of the center.

Comment by: Town of Corte Madera

Comment: The assumption that the site is ideally situated from a regional point of view for a major shopping center is unsubstantiated.

Response: The site has a combination of physical advantages making it suitable for development of a regional shopping center (see Paragraph 4.16).

Comment by: Brenda Brown

Comment: In letters to Marin County Supervisors, 16 Corte Madera stores went on record as opposed to the new shopping center.

Response: Opposition noted.

Comment by: Brenda Brown

Comment: Why couldn't the property be regarded as potential open space provided that just compensation be given the private owners?

Response: It could (Paragraph 8.02).

Comment by: Richard B. Collins

Comment: The granting of a Department of the Army permit for the Golden Gate Bridge Highway and Transportation District Larkspur Ferry Terminal is materially relevant and of a precedent setting nature with respect to most of the environmental questions which have been raised concerning the Mohn fill permit application. It is requested

Comment by: Marin Conservation League
Brenda Brown
William & JoAnn Gordon

Comment: The conclusion that there will be sufficient market in 1975 to support the proposed center is based on the assumption that the population will increase substantially and that purchasing power will remain constant or increase. However, with the water rationing and population controls, the population may not grow enough to support both new and existing centers. Also, purchasers have found their purchasing power reduced by the high rate of inflation.

Response: Marin County Planning Department estimates a low or controlled population in Marin County of 290,000 persons by 1985 (Paragraph 2.03). One of the basic assumptions in the analysis of the need for additional retail space within Marin County was that the San Francisco-Oakland Standard Metropolitan Statistical Area (SMSA), the State of California, and the United States as a whole will not suffer any major economic decline during the period under analysis. If this is the case, then income levels and purchasing power will at least remain relatively constant or perhaps rise slightly.

Comment by: R. V. Higgins

Comment: Any sales taken away from the present shopping center to the proposed center will not result in a net gain to Corte Madera.

Response: This is true; however, increased tax revenue from both centers will result in a net gain to Corte Madera.

Comment by: Town of Corte Madera
Brenda Brown
William & JoAnn Gordon

Comment: There is no mention of the aims of the redevelopment plans for downtown San Rafael and the possible effect of the Mohn center on a revitalized San Rafael downtown.

Response: The aims of the redevelopment plans for downtown San Rafael are discussed in Paragraph 2.17. The possible impacts on this area are discussed in Paragraph 4.11.

Comment by: Brenda Brown

Comment: For at least five years and perhaps many more years, additional tax revenue accruing from the center would go to schools and to payment of the bonded indebtedness of the town. No one has been able to predict when Corte Madera would even begin to pursue a "high level of capital improvement."

D-58

that all the matter, information and findings from the recently completed Ferry Terminal EIS be included in the final EIS for the Mohn Shopping Center. It is also requested that the permit granted the Golden Gate Bridge, Highway and Transportation District, be included in the final EIS.

Response: Information with respect to the Larkspur Ferry Terminal has been included in this statement (see Paragraphs 1.37-1.40, 2.24 and 2.30). The Department of the Army permit for the Larkspur Ferry Terminal project is not considered necessary for inclusion in this statement. The matters concerning the ferry terminal which Mr. Collins believes are particularly relevant to the Mohn application apparently relate to the deposition of dredge spoil on a large tract of diked marshland adjoining the shopping center site. This filling can be distinguished from the filling for which the present permit application is made, since the ferry terminal permit includes the condition that the dikes surrounding the spoil area must be broken to allow restoration of the area as a marsh.

Geologic concerns.

Comment by: The Resources Agency of California

Comment: Although hazards of construction on filled land over Bay Mud are identified, the mitigation of the hazards is not adequately described, nor are specified mitigation measures identified.

Response: The structural features to be incorporated into the project to permit differential settlement along the exterior of the building have been discussed in Paragraph 1.36.

Comment by: The Resources Agency of California
Brenda Brown

Comment: The specific investigation to determine seismic risks should be undertaken before filling.

Response: A detailed subsurface investigation of the site was conducted by James E. Slosson & Associates, and resulted in their report dated 1 June 1973. Information from this report has been included in the Environmental Statement. The expenditure of additional funds prior to obtaining approval for the placement of fill or prior to necessary approval to permit construction of the shopping center, does not appear feasible at this time. The firm of Safford & Fogelberg, Consulting Structural Engineers, will perform complete consolidation studies and dynamic analysis of the project, all of which will be submitted to the Corps and other governing agencies for approval.

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Comment by: The Resources Agency of California
Town of Corte Madera

Comment: The statement that there is "no real seismic hazard" is in conflict with the statement regarding liquefaction and other ground failure hazards. Also the statement that the "project site is better than average" is misleading in that average is not defined.

Response: The relative seismic hazards of the project area have been more fully discussed in Paragraphs 4.31-4.41. The average conditions referred to are average conditions in California where moderately deep, firm alluvium is present. This "average site" characterization has been deleted from the Final Statement.

Comment by: Town of Corte Madera

Comment: The adequacy of the information on settlement is questioned. Amplify the section on geology and soils so that the information can be related to this application and its intended construction methods.

Response: The problem of settlement has been discussed in Paragraphs 4.10-4.28. The structural design of the project is discussed in Paragraph 1.36.

Comment by: The Resources Agency of California

Comment: There is no mention of possible effect of the proposed landfill on the adjacent U.S. 101 Freeway foundation.

Response: The possible effect of the landfill on adjacent areas is discussed in Paragraphs 4.29 and 4.30.

Comment by: The Resources Agency of California

Comment: Statements regarding settling after surcharge of additional fill are confusing. The statement about 80 percent settlement in 10 years is not followed by adequate assessment of further settlement after final fill.

Response: The 80 percent settlement figure came from a statement entered into the 5 June 1973 District Public Hearing by Michael Prascher of the firm of Lee and Prascher, Consulting Engineers. As this figure cannot be further documented, the particular statement in question has been deleted. A more adequate discussion of settlement in the area can be found in Paragraphs 4.19-4.28.

Comment by: Brenda Brown

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Response: A more detailed discussion on the effects of settlement and seismic hazards on adjacent public utilities and roads can be found in Paragraphs 4.29, 4.30, and 4.40.

Comment by: Brenda Brown

Comment: How successful will the design techniques employed by the developer be in creating a structure which can withstand any liquefaction?

Response: The relatively low liquefaction potential of the various soils encountered at the site is discussed in Paragraph 4.37. The architectural design of the project is discussed in Paragraph 1.36.

Comment by: Brenda Brown

Comment: Why risk such potentially dangerous conditions as building in areas underlain by Bay Mud?

Response: Land is open, available, and financially feasible for this type of development by zoning standards. Studies indicate conditions, properly handled, will not be more dangerous than other similar building projects.

Comment by: Barbara Garcia

Comment: Is there some means by which the Corps can obtain a bond from the developer to insure that Corte Madera will not have to finance any off-site repairs required as a result of settlement, sinking, or seismic occurrences that the developer assures the fill will withstand?

Response: The Corps has the authority to require a bond from a developer; however, in this case, the Town would be the more appropriate agency to require such a bond.

Water quality concerns.

Comment by: Brenda Brown

Comment: How much more aggravated will the bypassing of raw sewage during extremely wet weather be as a result of the additional sewage from the new shopping center?

Response: The effect of incremental sewage production by the project is indeterminate, as discussed in Paragraph 4.43.

Comment by: The Resources Agency of California

Comment: There is no mention of the possible effect of the proposed landfill on the adjacent U.S. 101 Freeway drainage conditions.

D-63

Comment: Will the weight of a square foot of surcharge equal the weight of a square foot of building? If not, the weight of the building will affect even greater settlement.

Response: A square foot of surcharge would be about 110 pounds for every foot of depth. The depth of surcharge will vary from 5 to 20 feet, this the weight of a square foot of surcharge on the project site will vary from 550 pounds to 2,200 pounds. The weight of the building to be placed upon the fill is calculated to be 160 pounds per square foot.

Comment by: The Resources Agency of California

Comment: Data on Bay Mud thickness are inadequate to determine seismic response at the surface.

Response: Additional information on Bay Mud thickness has been included in Paragraphs 2.32-2.40.

Comment by: The Resources Agency of California

Comment: Statement on seismicity is too brief in that it does not recognize the inevitability of major seismic events.

Response: Additional information on seismicity has been included in Paragraphs 2.42-2.43 and 4.31-4.41.

Comment by: Brenda Brown

R. V. Higgins
William & JoAnn Gordon

Comment: Many Bay fill projects have not been successful.

Response: This point of concern has been added in Paragraph

Comment by: Marin Conservation League

Comment: Insufficient attention given to testimony given by Michael Prascher at the 4 June 1973 hearing.

Response: A large portion of the Draft Statement section on impacts on Geology and Soils was in fact extracted from Mr. Prascher's testimony. Paragraphs 4.19 and 4.20 have been revised to clarify his information.

Comment by: The Resources Agency of California

Brenda Brown
William & JoAnn Gordon

Comment: The potential effect of settlement and seismic

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Response: The evaluation of the impacts of the project on the highway drainage conditions has been more fully discussed in Paragraph 4.42.

Comment by: Katy & Francis Strauss

Comment: In reference to the statement, "This condition signals a threat to higher aquatic life" on page 22 (Draft Statement), it is most alarming that we are causing the death of our seas.

Response: Paragraph 4.43 pertains to the effect of incremental sewage production by the proposed project upon receiving waters. To establish that the redevelopment project would add the critical concentration of algal growth factor would prove to be an extremely complex and nearly impossible task. Any effect that the project would have on the receiving waters cannot properly be related to causing the death of the seas.

Waste disposal concerns.

Comment by: Department of the Interior, Pacific Southwest Region

Comment: An environmental working paper for the West Contra Costa County Dump asserts that it will operate 52 years instead of the 40-year period stated in the Draft Statement. We suggest this inconsistency be corrected.

Response: Projections of the useful life of a waste disposal facility must depend on projections both of population growth and of per capita waste production. Both such projections are necessarily approximate and problematical.

Comment by: Environmental Protection Agency, Region IX

Town of Corte Madera
Brenda Brown
William & JoAnn Gordon

Comment: The treatment of solid waste disposal should explore the quantities that will be generated. Mitigating measures should be explored to manage the quantities of solid waste.

Response: The generation and disposal of solid waste has been more fully discussed in Paragraphs 4.47-4.49.

Water Supply Concerns.

Comment by: Town of Corte Madera

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Comment: A discussion of the water supply should mention the Marin Municipal Water District moratorium.

Response: The water moratorium has been discussed in Paragraph 2.59.

Comment by: Marin Municipal Water District

Comment: There is no existing water distribution pipeline in the area proposed for the Balm Shopping Center.

Response: While there is no pipeline presently installed in the area for the proposed center proper, there is a line to the Highway Patrol Office located in the southwest corner of the site. This is the proposed site for one of the Department Store-Tire-Batteries-Accessorize structures. The water moratorium ordinance permits the replacement of existing water service facilities with new water service facilities which do not increase the consumption of water. This provision would permit the servicing of water to the TSA structure, or similar facility, as long as it does not increase the overall water consumption.

Comment by: Town of Corte Madera
Marin Municipal Water District

Comment: The estimated annual water demand of 13 acre feet is greater than Marin Municipal Water District's estimate of approximately 18 acre feet.

Response: The difference between the two estimates results from the fact that Marin Municipal Water District bases its estimate on total number of stores instead of area as does the developer.

Comment by: Town of Corte Madera
Brenda Brown

Comment: In your discussion of potential regional center sales demand being exported to San Francisco, you are using figures as actual rather than as estimates.

Response: Customer surveys conducted by Urban Projects have shown upwards of 35% to 40% of all Marin County shoppers who go to San Francisco visit Sausalito and Serrano regional shopping centers.

Comment by: Brenda Brown

Comment: The Hahn Corporation never made formal application for a water permit; therefore, the entire project is subject to the water moratorium.

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Comment by: Department of the Interior, Pacific Southwest Region
William & JoAnn Gordon

Comment: It is incorrect to assume that displaced animals will occupy other habitats without detrimental effects. When a habitat is destroyed, the wildlife population dependent upon it is eventually lost.

Response: This information has been incorporated into Paragraph 4.56.

Comment by: Council on Environmental Quality

Comment: The Final Statement should indicate a more clearly the overall impact of the project on wildlife habitat. At present, the description does not indicate the degree to which the areas set aside for wildlife habitat will be able to accommodate those species including endangered species, which may be displaced by the project.

Response: When habitat is destroyed, the wildlife population dependent upon it is eventually lost. This information has been incorporated into Paragraph 4.56.

Comment by: Gordon L. Chan

Comment: The Draft Statement is lacking much supportive data and observations.

Response: Supportive data and observations have been included where required.

Comment by: William & JoAnn Gordon

Comment: Madrone Associates completed their biological assessment in one month, whereas at least one year is necessary to carry out a valid and proper study because seasonal variations must be taken into account.

Response: In order to establish a more complete picture as to the wildlife usage of the area and adjacent habitat, Madrone Associates sent out a letter requesting documented information from several community groups. The Marin Audubon Society cooperated fully and provided copies of all original correspondence relating to the study. This information, which covers September 1967 to January 1973, is incorporated in Tables 14 and 15, along with sightings made by Madrone Associates' staff biologist during the course of their study (12 December 1972 to 24 January 1973).

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Response: Ernest W. Hahn, Inc., did in fact apply for a Pipeline Extension Agreement on 26 March 1973; however, approval was not granted before the moratorium ordinance went into effect in April 1973.

Comment by: Marin Municipal Water District

Comment: Cannot provide water to proposed center in foreseeable future.

Response: The legality of the water moratorium is presently being heard in the courts. If a development is in the public interest, the moratorium can be appealed and a variance requested. Recent appeals that have been approved include the Golden Gate Bridge, Highway and Transportation District's proposed Larkspur ferry terminal adjacent to the proposed center site.

Vegetation and wildlife concerns.

Comment by: Gordon L. Chan

Comment: If Odum is quoted as a authority, one could include his evaluation that an average acre of coastal marshland is valued at \$62,000; therefore, the Hahn salt marsh to be filled is worth \$2,300,000.

Response: The dollar and productivity values of the marshland are discussed in Paragraph 2.63.

Comment by: Department of the Interior, Pacific Southwest Region

Comment: The saltmarsh lagoons or ponds referred to in the section of the Draft Statement on local land use are elsewhere identified as "cut-off meadows". Available information suggests the present lagoons were once components of a tidal meadow. For consistency, we suggest that the meadow terminology be used throughout the Final Statement.

Response: The meadow terminology has been used throughout the Final Statement.

Comment by: The Resource Agency of California

Comment: The water in the ponds north of the project site is very important to many species of wildlife. It is recommended that Corte Madera provide the necessary water control to maintain an adequate level in the ponds.

Response: This information has been discussed in Paragraph

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Comment by: Department of the Interior, Pacific Southwest Region

Comment: Table 3 (Draft Statement) outlined the mitigation measures and potential results for habitat improvement in the project area without the project. Suggest that this table be thoroughly discussed in the text in order that reviewers will be aware of potential fish and wildlife benefits that would accrue without the project.

Response: Although this table has been omitted from the Final Statement, it is discussed in Paragraphs 6.03-6.06.

Comment by: Department of the Interior, Pacific Southwest Region

Comment: The annual fish and wildlife losses caused by production foregone during the project life are irretrievable resource commitments whether or not the affected species can be re-established.

Response: This consideration has been included in Paragraph 6.01.

Comment by: Gordon L. Chan

Comment: How and to what extent is this wildlife habitat significant?

Response: The importance of the habitat area has been discussed in Paragraphs 2.60-2.75 and Paragraphs 4.54-4.58.

Comment by: Town of Corte Madera

Comment: Delete the word "salt" from the reference (page 2 Draft Statement) to the marsh area along the easternmost border of the redevelopment area.

Response: The marsh referred to is in fact a high quality salt marsh and therefore is designated as such in Paragraph 2.25.

Visual concerns.

Comment by: Town of Corte Madera
Brenda Brown
William & JoAnn Gordon

Comment: Disagree that proposed center will have minimal visual impact, particularly from elevated residential areas.

Response: Additional information on visual impacts has been added in Paragraphs 4.59-4.60.

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Comment by: Town of Corte Madera

Comment: The immediate project site is highly visible from adjoining areas.

Response: Although highly visible from the elevated residential area to the south, the proposed site is not highly visible from the immediately adjoining low areas, with the exception of U.S. 101 due to the roadway's elevation (see Paragraph 2.76).

Comment by: Town of Corte Madera
Brenda Brown

Comment: Who will be responsible for upgrading the appearance and insuring the maintenance of the entire area?

Response: Corte Madera will be responsible for maintaining the "mitigation area", while Hahn will be responsible for their property.

Air quality concerns.

Comment by: Environmental Protection Agency, Region IX

Comment: The time periods used in specifying the National Ambient Air Quality Standard (NAAQS) should be considered in the analysis. Loren's method, as refined by Thullier, is applicable to regional analysis and "average" conditions, but it is not sufficiently detailed for the analysis of a shopping center.

Response: The air quality impact analysis used for the DEIS has not been used in this document. The new air impact analysis is based on the Bay Area Air Pollution Control District "Guidelines (1975)". The project impact on air quality is presented in paragraph 4.63(f) and Appendix B.

Comment by: Brenda Brown

Comment: Will the effect of the "sink" of local soil and vegetation be severely damaged by the Hahn project?

Response: This is not considered to be a significant project impact. The air quality impact of the project is presented in Paragraph 4.63(f) and Appendix B.

Comment by: Environmental Protection Agency, Region IX

Comment: Consideration of traffic versus air quality, parking versus air quality, as well as the background values that were used, is necessary.

D-66

Comment by: California State Air Resources Board

Comment: In regard to air quality, the DEIS appears inadequate in several respects. First, the section of the DEIS pertaining to environmental setting does not contain information on: (1) existing air quality trends in the project area, (2) local meteorology and topography, and (3) sensitive receptors in the project impact area. Second, the DEIS does not address adequately the air quality impact of the project. The DEIS needs to include quantification of the vehicular travel generated by the proposed project and estimate the associated air pollutant emissions. Finally, the DEIS does not address adequately the cumulative impact aspect of the project. The report concludes on page 30 that the project's impact on air quality is "...so small that it is incalculable when considered on a regional, county and sub-basin scale." This statement evades the issue since the project will contribute to the total emission burden and will likely stimulate additional development in the area.

Response: Paragraph 2.80, Table A, and Appendix B now discuss existing air quality conditions. Paragraph 2.74 outlines significant meteorological conditions for the area. The immediate project area contains no hospitals, nursing homes, or other "Sensitive Receptors" as defined by the Bay Area Air Pollution Control District (1975). The Impact on Air Quality Section (Paragraph 4.61(f)) now discusses project impact as does Appendix B. It is agreed that the above quoted statement from page 30 of the DEIS is indeed not addressing the issue. Paragraph 4.63, Appendix B, and Table 3 present information useful for assessing the air quality impact of the project. The project would contribute to the total emission burden, as would any other motor vehicle oriented project. Effective public transportation access to the shopping center would be one method of minimizing this impact. Additional air pollutant emissions in the area due to project related growth, if any, would be under the control of the local planning agencies. If the local populace desires increased development it could happen, if they do not, it probably would not happen.

Noise concerns.

Comment by: Environmental Protection Agency, Region IX

Comment: The noise levels described (57-62 dBA) are suitable for a commercial development of this type. However, these noise levels may have a deleterious effect on the wildlife found in the adjacent marsh areas and feeding ponds. A more thorough evaluation of the effect of noise on wildlife is necessary. In addition, a discussion of construction noise and blasting and their effect should be included.

Response: Traffic considerations were taken into account in determining air quality as outlined in Appendix B and Paragraph 4.61(f). Alternatives "2" and "4" are essentially the background concentrations.

Comment by: Environmental Protection Agency, Region IX

Comment: The information (Table 2 in Draft Statement) is on a scale of time and space that is larger than would enable an assessment of air quality resulting from construction of the project. From the information given it cannot be determined whether or not violation of the NAAQS would occur.

Response: The revised air quality analysis used in this Final EIS (Paragraph 4.61(f) and Appendix B) is a useable scale and compares projected concentrations to the standards.

Comment by: Environmental Protection Agency, Region IX

Comment: There is not sufficient data or information in the air quality sections to justify the statements made in the text.

Response: The text has been significantly revised to reflect the air quality analysis which has been carried out since publication of the DEIS.

Comment by: Town of Corte Madera

Comment: Is the assumption that a reduction of automobile exhaust emissions will occur in the future due to EPA requirements still applicable in view of the energy crisis putting off various requirements?

Response: The air quality impact of a project should not be evaluated merely in light of possible emissions reductions due to government regulations. The degree of future regulation is very unpredictable.

Comment by: Town of Corte Madera

Comment: The statement that the proposed project would produce some increase in air pollution concentrations, but that this increase is expected to be below those concentrations which would be likely to exceed standards, is questionable.

Response: Table B indicates that the standard would be exceeded for organics for all alternatives is now exceeded.

D-70

Response: As indicated in Section 3f (Draft Statement), EPA publication NRC 500.1 reports that there is little data available on the effect of noise on wildlife. A discussion of construction noise (there will be no blasting) along with a discussion of current wildlife impact information is included in Paragraphs 4.65-4.73.

Comment by: Environmental Protection Agency, Region IX

Comment: The noise impact of the proposed development has not been adequately addressed in the Draft Statement. No reference is cited for the noise levels described on page 11 (Draft Statement). A complete description of the noise impact such as that found in the EIS (Sedway/Cooke) should be included in the Final Statement.

Response: A more detailed analysis of noise impact can be found in Paragraphs 4.65-4.73.

Comment by: Town of Corte Madera
Brenda Brown

Comment: If noise is indeed a factor determinant of design, wouldn't it be quite simple to design an office or educational facility with an inward orientation?

Response: An inward orientation type structure would be acoustically suitable for this area (see Paragraph 4.66).

Comment by: Town of Corte Madera

Comment: The assumption that an exclusive bus right-of-way would be located on the old railroad right-of-way is in conflict with the Town's proposed General Plan.

Response: In estimating the noise impact of the proposed project various conditions had to be assumed. One of these was the use of the railroad right-of-way for buses. An alternate assumption considered in Paragraph 4.71 was that of having a mass transit bus route in the median of U.S. 101 proposed in the General Plan (see Appendix C).

Comment by: Town of Corte Madera

Comment: Question source of information in reference to speed of express busses.

Response: Source of information was Sedway/Cooke, 1973.

Historical and archaeological concerns.

D-72

D-71

Comment by: Advisory Council on Historic Preservation
Department of the Interior, Pacific South
Region

Comment: An archaeological survey of the project area has been proposed, but the Draft Statement does not discuss subsequent action.

Response: Substantive information on the historical and archaeological features of the proposed project site has been included in Paragraphs 2.91, 2.92, and 4.74.

Concerns related to social and cultural habits and customs.

Comment by: William & JoAnn Gordon

Comment: There is absolutely no evidence to support the contention of "social barriers" between east and west Corte Madera.

Response: The reference to social barriers has been deleted.

Comment by: Town of Corte Madera

Comment: The schools of the Lathrop-Corte Madera School District are presently operating below capacity rather than to capacity.

Response: This information is included in Paragraph 2.99.

Comment by: Department of Health, Education and Welfare,
Regional Office

Comment: The Draft Statement indicates that the project will not be growth inducing to Corte Madera or surrounding communities. However, if this should occur, the elementary and high school district will be required to exceed their present capacity. Would shifting the school district boundaries be a feasible solution to this problem?

Response: At this time it is neither feasible nor necessary to shift school district boundaries as discussed in Paragraph 4.77.

Comment by: Department of the Interior, Pacific Southwest
Region

Comment: The recreation section (page 36, Draft Statement) does not say that the restrictive covenant will safeguard wildlife; conversely, on page 45, Paragraph 2 (Draft Statement), it is stated that it will. If the welfare of wildlife and its habitat will be protected by the covenant, this condition should be clearly stated throughout the rest.

Response: The welfare and wildlife and its habitat will be protected by the covenant. This condition has been clearly stated throughout the Final Statement.

D-73

Comment by: The Resources Agency of California

Comment: Some of the various additions to and modifications of U.S. 101 have been investigated; however, no decision has been made to recommend these changes. The changes discussed in the report (Draft Statement) cannot be understood adequately without a diagram. In addition the report is inadequate in that it does not contain sufficient data for evaluation of the impact on state highway traffic conditions.

Response: The Final Statement has been rewritten to include the planning and funding data supplied by the State Resources Agency. While the various plans for roadway improvements are still in the initial stages, they are presented in Appendix C for information purposes only and should not be considered as actual plans at this time.

Comment by: The Resources Agency of California

Comment: The State Department of Transportation has no plan for reconstruction of U.S. 101 between Tamalpais Drive and Lucky Drive, except for the present proposal to add additional lanes to the freeway.

Response: This has been reflected in Paragraph 2.105 and

Comment by: Town of Corte Madera
Marin Conservation League
Brenda Brown

Comment: The proposal for the William Avenue Interchange has been eliminated from the proposed Corte Madera General Plan. What effect will this elimination have on traffic conditions aggravated by the new center?

Response: The final plans for freeway improvement have not been approved, therefore the impact of the proposed center on various traffic plans has not been discussed.

Comment by: Marin Conservation League

Comment: Inadequate attention has been given to concerns expressed by citizens of Corte Madera on the localized increase in traffic and noise.

Response: The impacts of the proposed project on traffic and noise are discussed in Paragraphs 4.81-4.91 and Paragraphs 4.65-4.73, respectively.

D-75

Concerns related to vehicular circulation.

Comment by: Town of Corte Madera

Comment: Should effects of current energy crises be taken into account when estimating traffic circulation?

Response: A long term effect of the energy crises may be a greater utilization of mass transit, however, the present lack of data precludes any definitive estimates at this time.

Comment by: Council on Environmental Quality

Comment: The issue of congestion on the adjacent highway is extremely important and we would suggest that the Corps of Engineers assure that the improvements to the highway are properly timed so as to prevent a high degree of congestion as a result of project construction. The Final Statement should indicate the degree to which the construction activities on the highway improvements will be completed prior to the added burden of vehicles resulting from the proposed shopping center.

Response: During the development of the proposed center, the Developer and his Traffic Consultant have worked with Corte Madera and the State Department of Transportation in examining and designing improvements to the highway in the vicinity of the proposed site. It is realized that traffic improvements immediately adjacent to the site should be implemented before the opening of the center. As the various plans for roadway improvements are still in the initial stages, the degree to which the construction activities on the highway will be completed cannot be estimated at this time.

Comment by: Town of Corte Madera
Marin Conservation League
Brenda Brown

Comment: The State Department of Transportation has estimated that the reconstruction of the Tamalpais Drive - U.S. 101 interchange would not be completed for ten years. We believe this is no critical an issue that no project of the magnitude of the proposed center should be started before completion of the interchange.

Response: Improvements to U.S. 101 in the vicinity of the proposed center are discussed in Appendix C. As stated in Paragraph 4.86, there are traffic improvements immediately adjacent to the site which should be implemented before the opening of the shopping center.

D-74

Concerns related to public transit.

Comment by: Brenda Brown

Comment: Many Corte Madera residents would strongly object to the dual use of the project as a regional shopping center and terminal parking area for any forthcoming transit system.

Response: Objection noted.

Comment by: Town of Corte Madera

Comment: The dual use of the project as a regional shopping center and terminal/parking area for any forthcoming transit system is not current on the parking application.

Response: Comment noted, however, this fact does not preclude such possible future use of the project.

Concerns related to pedestrian and bicycle circulation.

Comment by: The Resources Agency of California

Comment: No basis is given for the statement that access between east and west Corte Madera is extremely hazardous over the Tamalpais interchange since sidewalks are not provided.

Response: A more detailed discussion on the hazards of this area has been included in Paragraphs 2.119-2.120.

Comment by: Marin Conservation League

Comment: In Sadway/Gook's plan the need to increase accessibility of those living east of U.S. 101 to facilities west of 101 is subordinated to excessive demand of easy access to the proposed center.

Response: The Environmental Statement concerns itself with the proposed shopping center and its alternatives. Beneficial or adverse impacts with respect to circulation aspects are limited to their relation to the center.

Comment by: Town of Corte Madera

Comment: Reference to improvement of the railroad right-of-way does not reflect present plans of the Golden Gate Bridge, Highway and Transportation District.

Response: Proposed Town plans for the right-of-way are discussed in Appendix C.

D-76

Regional planning concerns.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: The ABAG and Marin County Plans are merely suggestive rather than legally binding.

Response: The three plans (ABAG, Marin County, and Corte Madera) that include the proposed project site are discussed in Paragraphs 3.01-3.12. The fact that the ABAG and Marin County Plans are suggestive is included in this section. It should be noted, however, that the Proposed Corte Madera General Plan does conform with these two regional plans.

Comment by: Town of Corte Madera

Comment: The applicable regional plans propose the Corte Madera-Larkspur area as a regional activity center rather than a center for commercial facilities.

Response: The ABAG and Marin County Plans designate the Corte Madera-Larkspur area as a Community Center. The Corte Madera General Plan calls for a region-serving commercial area to be developed in the area of the proposed shopping center. These plans are discussed in more detail in Paragraphs 3.01-3.12.

Concerns related to alternatives.

Comment by: Brenda Brown

Comment: Has the alternative of incorporating the project site into the Town's or County's open space lands been considered?

Response: To date the Town's General Plan has not indicated such consideration.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: Various comments were received on various alternative regional center sites.

Response: In considering the available alternatives the Corps is limited to those within its jurisdiction. In the case of the fill permit for the proposed Hahn Shopping Center the two alternatives are to either grant or deny the permit.

Comment by: Marin Conservation League

D-77

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: Comments of the general public and arguments used by citizens in opposition to the center were excluded from the Draft Statement. Testimony given by expert witnesses at the Public Hearing was not mentioned in the Draft.

Response: Responses to comments received in the Public Notice, EIR, and Draft Statement were utilized in preparing the Final Statement. Material furnished by experts, both for and against the proposed project, has been cited in the Final Statement.

Comment by: Marin Conservation League

Comment: The Draft Statement does not deal with the fact that the proposed development is a massive project relative to the size of Corte Madera, whose citizens have expressed a strong desire to preserve its residential characteristics.

Response: The location for the proposed center has been sited as regional commercial by the Town. The area is not suitable for residential development. The development of commercial facilities in this area should have little impact on the residential character of Corte Madera.

Comment by: Katy & Francis Strauss

Comment: We do not need another shopping center in Marin County.

Response: Comment noted.

Comment by: Brenda Brown

Comment: The whole concept of a regional shopping center may soon be outmoded.

Response: Comment noted.

Comment by: The Resources Agency of California

Comment: No information is provided as to the professional status (discipline or registration) of persons responsible for this report.

Response: A list of consulting firms, with discipline or registration of their principals, is found in Table 25.

Comment by: Leo Becker

D-79

Comment: Do not agree with the conclusion that the optimum alternative appears to be the development of the two adjacent sites (existing and proposed) within the framework of their specialities.

Response: Disagreement noted. The impacts of the proposed center on the existing center are discussed in Paragraphs 4.05-4.08.

Comment by: Town of Corte Madera

Comment: Discuss all alternative uses of the area.

Response: Alternative uses of the area have been addressed in Paragraphs 6.01-6.13.

Other concerns.

Comment by: Brenda Brown
R. V. Higgins
William & JoAnn Gordon

Comment: Corps violates objectivity by its almost total reliance on Sedway/Cooke EIR.

Response: The Sedway/Cooke EIR (1973) was used as the basis from which to start. The preparation of the Draft Statement entailed integration of information from the EIR; of subsequent written changes by the applicant; and from technical responses by Sedway/Cooke to comments received on both the Public Notice and the EIR. This extensive revision, rewrite, and coordination as well as continuous review by various District disciplines including biologists, hydrologists, geologists, landscape architects, economists, attorneys, and civil engineers, resulted in the Draft Statement. Formal comments received on this Draft Statement have resulted in further revision.

Comment by: Brenda Brown

Comment: Many of the facts and opinions in the Draft Statement could have been used to build a strong case against the center.

Response: Environmental statements constitute an integral part of the interdisciplinary plan formulation process and serve as a summation and evaluation of the effects, both beneficial and adverse, of a proposed action and alternative actions.

Comment by: Brenda Brown
William & JoAnn Gordon

Comment: Unsupported data, assumptions, and predictions play too large a part in the Draft Statement.

Response: The various sources used in the preparation of the Final Statement have been cited.

D-78

Comment: Since it is possible that the Corps has been unaware of the financial and business relationships between Urban Projects, Inc. and its principals, and Ernest W. Hahn, Inc., its officers and employees, a copy of a letter of Full Disclosure dated 13 June 1972 is forwarded.

Response: The Full Disclosure letter is found as an enclosure to Letter D-17 in Appendix D. In the preparation of environmental statements on regulatory permit applications, information provided by the applicant is supplemented and amended as required. All such information received is reviewed for adequacy and if found acceptable is used in the statement. The information provided by Urban Projects, Inc. was reviewed by the District and found to conform in general with similar reports on the area (Environmental Science Associates, 1973 and Terra Engineering, 1974). Comments and objections received on the economic aspects of the project have been discussed in Paragraph 9.15 and where appropriate have been included in this statement. The information provided by Urban Projects, Inc. was considered adequate and was accepted as valid data in the absence of information to the contrary. The relationship between Urban Projects, Inc. and Ernest W. Hahn, Inc. was unknown to the Corps prior to the receipt of Mr. Becker's letter. In view of the data uncovered during the analysis of the information provided by Ernest W. Hahn, Inc., the relationship, by itself, does not appear to alter the acceptability of such information and the information is still considered adequate.

Comment by: Town of Corte Madera

Comment: The statement that certain benefits could evolve if the project were carried out needs clarification.

Response: This statement is the lead sentence in Paragraph 7.02 which outlines benefits which would evolve from the project.

Comment by: Town of Corte Madera

Comment: Routing of trucks for import of fill must be addressed.

Response: The impacts associated with the importation of fill material are addressed in Paragraphs 4.96-4.102.

Comment by: Ernest W. Hahn
James L. Barrett

Comment: The applicant objects to the inclusion of the recent letter from the Town of Corte Madera in the Corps decision making process concerning the fill permit application. California law requires a fair and impartial hearing by local governmental agencies in matters such as the one at issue. The courts have voided local agency action where bias and prejudice exists.

D-80

Response: The District received the aforementioned letter (Document A-1) before completion of the EIS, and it is therefore, timely for inclusion within this EIS, since our regulations require that copies of all correspondence received from agencies on the public notice list concerning an application will be attached to the final EIS (25 USC 1105-2-307, Appendix C, Paragraph 42(4)). See also CMQ Guidelines, 40 C.F.R. 1500.10, 38 FR 10440, 30555). It is particularly necessary to include the comments of State or local agencies which are empowered to issue or deny authorization in regard to the work views in determining the public interest (see 33 C.F.R. 209.120(f)(3)(1976)). The matters of State law to which this comment refers, while possibly of some relevance in assessing the public interest, do not have controlling significance in a Federal permit action.

APPENDIX E

ALTERNATIVE USES OF THE MARIN MALL SITE

The content of this Appendix comes from the Livingston and Associates Environmental Impact Report which was prepared for the Marin Mall project. The analysis provided in this Appendix is that of Livingston and Associates. If the Corps permit were denied, then the applicant would be free to select an alternate use for the site, which might be one of the alternatives herein listed. If the new project was found to also require a Corps permit, then the applicant would again have to apply for Corps authorization.

1. ALTERNATIVES TO THE PROPOSED ACTION

2. Six alternative kinds of development, plus the base case of no development, have been considered in lieu of the proposed Marin Mall Regional Shopping Center. Each of the alternative uses and combinations of uses was prescribed by the Town to be studied considering their economic viability, as well as the traffic they would generate and all other relevant environmental, economic, fiscal, and social impacts. The planning consultants, in consultation with the economic consultants, initially projected the extent of development for each of the alternatives that could reasonably be assumed to be absorbed by 1985. Impacts were estimated based on these projections, and these impacts were reported in Appendices 3 (economic and fiscal impacts), 4 (energy consumption impacts), 5 (hydrologic and water quality impacts), 6 (transportation impacts), and 9 (noise impacts) of the draft EIR. Subsequently the Town decided that an in-depth study of the economic feasibility of each of the alternative uses should be made. The demand projections of this study (Appendix 11 of the draft EIR) turned out to be consistent with the original projections of the extent of development by 1985 for each of the alternative uses except light industry. Consequently the figures for light industry in Alternatives 3 and 5 were adjusted to conform with the projections of the economic feasibility study, and the impact estimates were based on the revised figures. Although additional development might take place on the site after 1985, impacts were measured for that date in order to be comparable to Marin Mall's impacts.

The six alternatives studied are summarized below. While each of the alternatives is consistent with the 1985 demand projections, they do not reflect the economic feasibility of development in terms of land and improvements costs for the project site. In other words, the alternatives indicate what the extent of development would be in 1985 if land and improvements costs were not a factor. However, the economic feasibility study concluded that, considering land, site preparation, construction, and financing costs, none of the alternative uses except a combination of condominium townhouse and rental apartment development, or possibly a mixed residential and commercial use project, would yield a sufficient rate of return to attract a prudent investor.

Alternative 1: Residential (30.27 acres)
870 multi-family residential units
1,300 parking spaces (1,200 covered)

Alternative 2: Offices (26.5 acres by 1985)
270,000 square feet of office space
20,000 square feet in two or more restaurants
1,100 parking spaces

R

Alternative 3: Light Industry (45.5 acres by 1985)
650,000 square feet of light industry
1,600 parking spaces

Alternative 4: Retail/Office (42.9 acres by 1985)
200,000 square feet of office space
250,000 square feet of specialty retail stores
15,000 square feet theater
20,000 square feet in two or more restaurants
2,200 parking spaces

Alternative 5: Office/Light Industry (43.8 acres by 1985)
180,000 square feet of office space
400,000 square feet of light industry
1,500 parking spaces

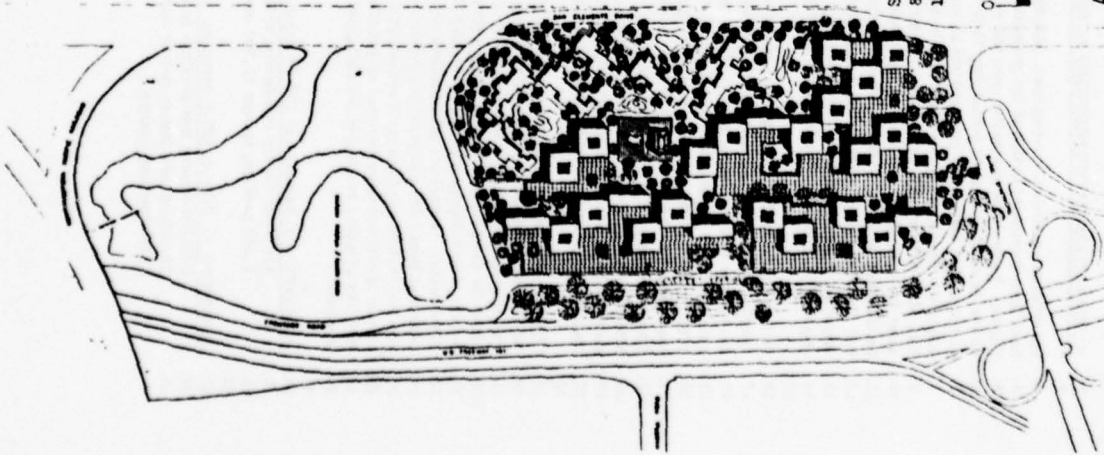
Alternative 6: Developed Open Space (50.27 acres)
Playfield
Picnic tables
Tennis courts
Recreation building
Swimming pool
150 parking spaces

Alternative 7: Base Case
No development

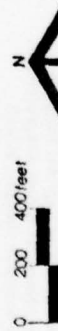
Site plans (Figures 20-25) were prepared for each of the alternatives except the base case, showing the extent of development projected in 1985. The building space, parking, landscaping, roads, and other improvements shown in the drawings were used to assist in estimating the impacts of the alternatives. No roads or other development is shown on any of the alternative site plans within the first 100 feet of the northern portion of the site adjacent to the existing meanders. This 100 foot buffer zone was requested by the Department of the Interior and the Bureau of Sport Fisheries and Wildlife in a letter to the U.S. Army Corps of Engineers. (17)

(17) U.S. Army Corps of Engineers, San Francisco, Draft Environmental Impact Statement, Hahn Shopping Center Permit Application Marin County, California, 1974, Exhibit G, Letter from Mr. William T. Davoren, Permit Review Officer, Department of the Interior, Pacific Southwest Region, June 5, 1973.

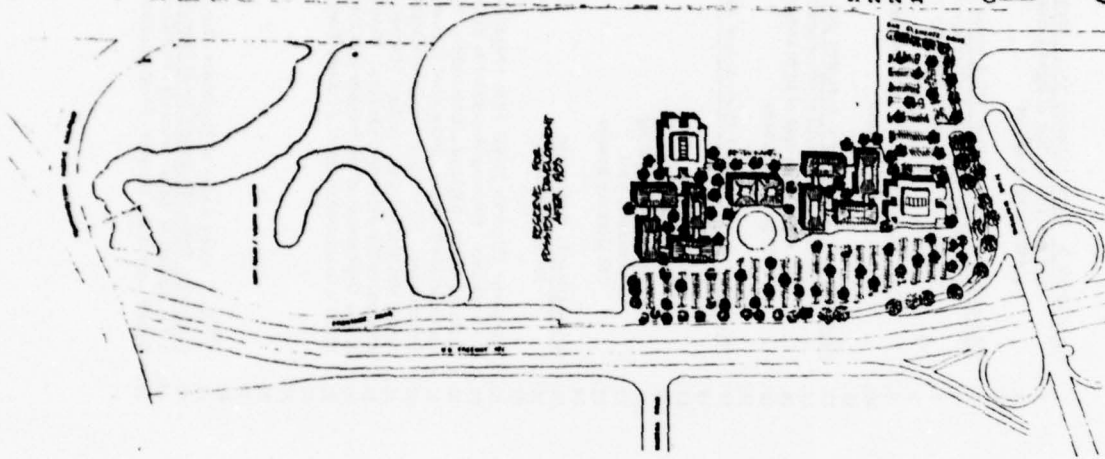
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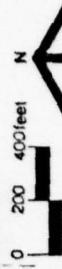
Site area: 50.27 acres
 870 multi-family residential units
 1,300 parking spaces (1,200 covered)



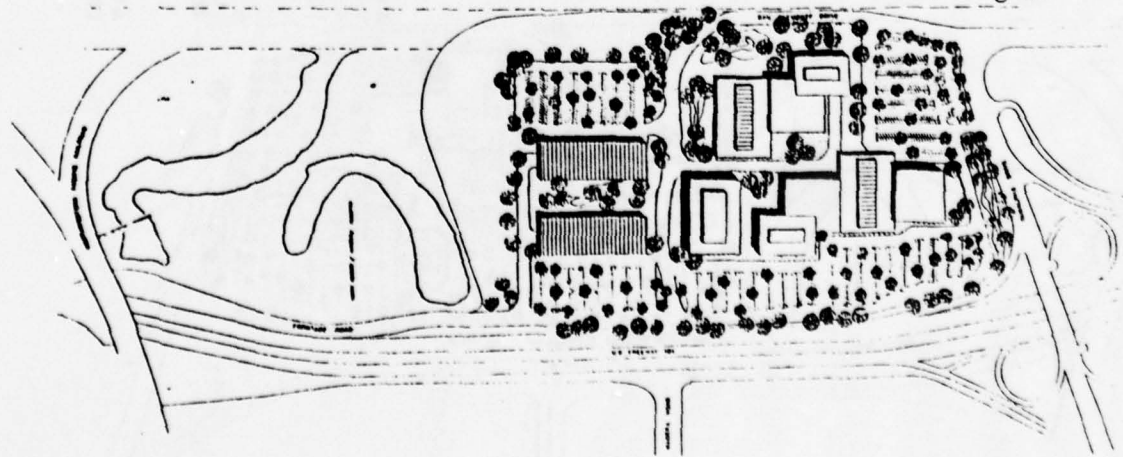
ALTERNATIVE 1: RESIDENTIAL



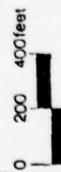
Site area: 26.5 acres by 1985
 270,000 sf of office space
 20,000 sf in two or more restaurants
 1,100 parking spaces



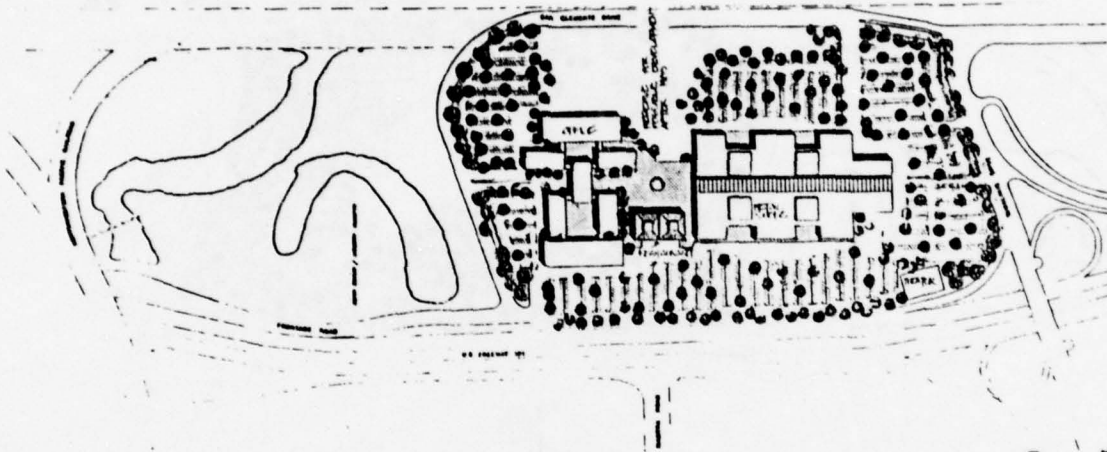
ALTERNATIVE 2: OFFICE



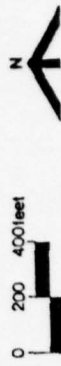
Site area: 45.5 acres by 1985
 600,000 sf of light industry
 1,500 parking spaces



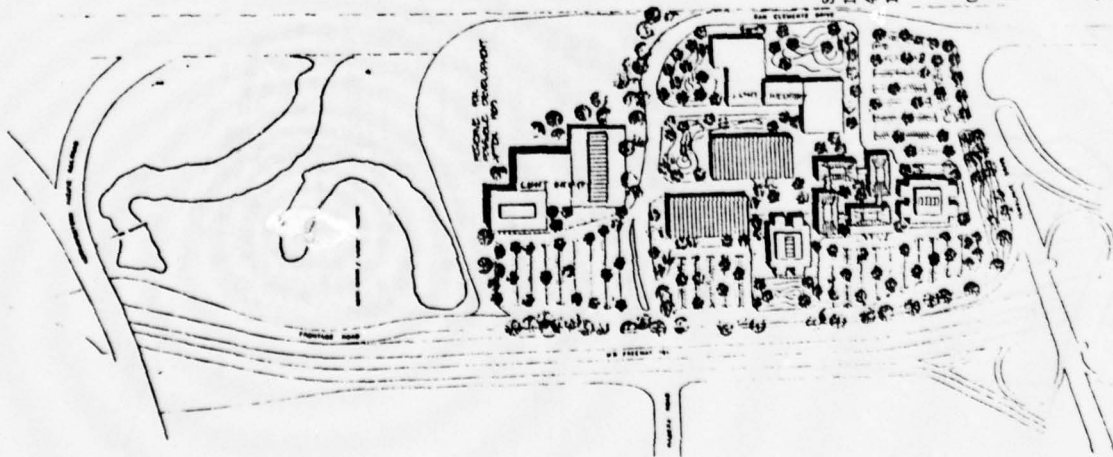
ALTERNATIVE 3: LIGHT INDUSTRY



Site area: 42.9 acres by 1985
 200,000 sf of office space
 250,000 sf of specialty retail stores
 15,000 sf theater
 20,000 sf in two or more restaurants
 2,200 parking spaces

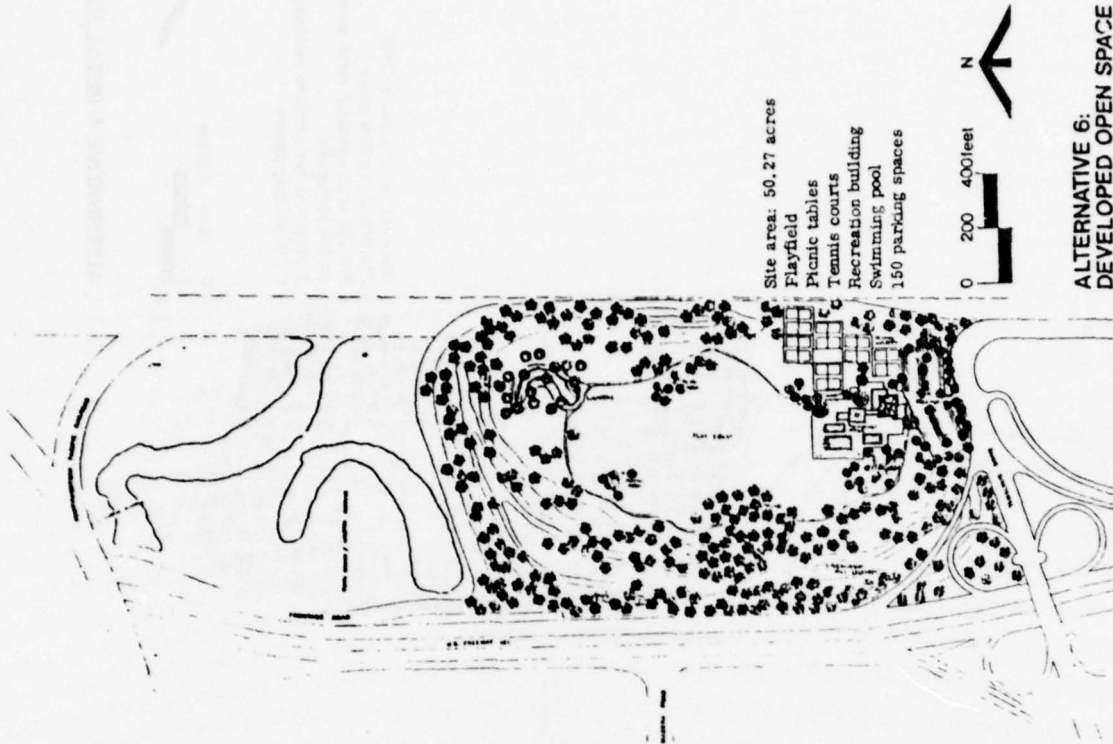


ALTERNATIVE 4: RETAIL/OFFICE



Site area: 43.8 acres by 1985
 160,000 sf of office space
 400,000 sf of light industry
 1,500 parking spaces

ALTERNATIVE 5: OFFICE/
 LIGHT INDUSTRY



Site area: 50.27 acres
 Playfield
 Picnic tables
 Tennis courts
 Recreation building
 Swimming pool
 150 parking spaces

ALTERNATIVE 6:
 DEVELOPED OPEN SPACE

1. ALTERNATIVE NO. 1

2. The residential development would have a favorable impact on existing
3. Corte Madera and Marin County retail businesses because additional resi-
4. dents would be accommodated and their purchasing power added to the
5. present consumer base. Minimal continuing permanent employment would
6. be generated. Construction employment might amount to 355 full-time-equiv-
7. alent jobs, based on an estimated construction payroll of \$20.0 million and a
8. build-out period of three years. The project would increase the Marin County
9. residential inventory by some 870 units and reduce pressures on the existing
10. housing stock, thus alleviating to a small degree escalating costs or rents
11. of existing units.
12. It is projected that the units would consist of approximately half (435) apart-
13. ments with approximately 200 one-bedroom units, 135 two-bedroom units,
14. 100 three-bedroom or two-bedroom and den units, and 435 townhouses and
15. garden apartment-type condominium units. A residential mix of this con-
16. figuration, coupled with the likelihood that the average condominium unit
17. would have a sale price of \$66,000 and the average apartment unit would
18. rent for approximately \$450 per month, would result in a very low ratio of
19. students per unit. Approximately 125 elementary school students, 85 secondary
20. school students, and 45 junior college or college students could be expected.
21. Annual property tax revenues to the Town of Corte Madera should approach
22. \$160,000 based on an expected assessed valuation of \$11.5 million for the
23. 870 residential units, and other revenues, primarily from per capita sub-
24. ventions, would be \$39,215. Annual public service costs are estimated to
25. be \$320,985, covering police and fire protection to the development and
26. public works maintenance costs for off-site streets, street lighting, and
27. landscaping. Annual property tax revenues to the Larkspur School District
28. would total \$238,740 at the prevailing composite District tax rate of \$2.076
29. per \$100/AV. Expenditures could be as much as \$175,000 annually, based
30. on current Larkspur School District costs per student of \$1400. Tax
31. revenues to the Tamalpais Union High School District could reach \$338,215
32. annually at the prevailing \$2.941/\$100 AV composite tax rate. Expenditures
33. per student are uncertain. The actual cost-revenue balance is hard to
34. estimate, but a positive relationship is likely because of the anticipated low
35. ratio of students per housing unit. Revenues and costs to other county public
36. agencies are expected to be in balance or to lean toward a plus situation.
37. Assuming that the residential units averaged 1,000 square feet each, it
38. is estimated that this development would consume annually 25.1 billion BTU
39. of electricity for heating and ventilating. Gas consumption could reach 36.5
40. billion BTU per year. At 2.5 persons per unit and 85 gallons per capita per
41. day, 185,000 gallons of sanitary waste would be produced each day, about

1. 16 percent of the Sanitary District's current capacity and more than all other
2. alternatives. The 870 housing units would consume 139 acre feet of water
3. supply annually or about twice Marin Mall's needs, if the water were avail-
4. able.
5. The residential development would generate a number of evening peak
6. hour vehicle trips equal to 27 percent of Marin Mall's. None of the U.S.
7. 101 interchange or the Redwood Highway improvements would be necessary
8. to serve this alternative at an adequate service level in 1985. Tamalpais
9. Drive would have to be widened to four lanes east of the overpass, with
10. signals at Paradise Drive south and at San Clemente Drive. For evening
11. peak inbound trips, transit demand would be 50 percent greater than Marin
12. Mall's demand. Bicycle lane requirements would be the same as for the
13. shopping center.
14. This alternative would cover with fill an amount of wetlands equal to the
15. Marin Mall project. A berm and fencing would be necessary to separate de-
16. velopment from wildlife habitat areas. The impacts with respect to soils,
17. geology, and seismicity of the site would be the same as Marin Mall's, but
18. the lesser amount of pavement would result in less storm water runoff and
19. pollution potential.
20. Noise impacts would depend on the amount of fill required for the development
21. and the number of trucks needed for haul. The visual impacts would be simi-
22. lar to those created by Marin Mall insofar as the building heights would be about
23. the same, but there probably would be more landscaping which would tend to
24. soften the visual impression made by the project.

2. ALTERNATIVE NO. 2

1. Office development on the site would have a positive impact on Corte Madera
2. and countywide retail business due to increased employment. Some pressure
3. on the residential market might be felt as new jobs were created in the
4. area, although the cost/rent impact probably would not be significant.
5. Permanent employment of 600 could be expected to depend primarily on the
6. transfer of office jobs from other locations. Construction employment could
7. reach 168, based on a construction payroll of \$6.3 million over a two year
8. period.
9. Annual property tax revenues to the Town should approach \$70,000 based on
10. an expected assessed valuation of approximately \$5,000,000 for the projected
11. 270,000 square feet of office space and 20,000 square feet of restaurant
12. space. Annual sales tax revenues from the restaurants are projected at
13. approximately \$16,000 per year to Corte Madera. Revenue from other
14. miscellaneous sources is estimated at \$6,160 per year. Total revenues
15. to the Town should approach \$92,160 per year. Total costs are calculated

1. at \$270,565 including fire protection at \$175,741, police protection at \$74,324, and public works costs of \$20,500 annually.
- 2.
- 3.
4. Energy use for the heating and cooling of offices would be 10.8 billion BTU of electricity annually. Restaurants would consume 4.7 billion BTU per year.
5. Natural gas consumption could reach 16.4 billion BTU annually. Sanitary wastes are projected to be 37,000 gallons per day, or about 3 percent of the District's current capacity. The offices and restaurants are expected to require 35.5 acre feet of water annually or 63 percent of the shopping center's needs. Because this alternative would cover about half as much land area as Marin Mall, the amount of storm drainage would be proportionately less. Present ponding capacity would be reduced only 15 percent.
- 13.
14. Evening peak hour traffic generated by this alternative would only be 25 percent of that produced by Marin Mall. All U.S. 101 interchanges would operate satisfactorily in 1985, and only a four lane Tamalpais Drive with intersection signalization would be necessary east of the freeway. The demand for transit service would be one-third that of Marin Mall's during the evening peak period.
- 19.
20. The smaller office development would have distinct advantages over Marin Mall in that most of the wetland area and all existing drainage ditches could be preserved for their wildlife habitat values. Long term preservation, however, would depend on the "reserve" area's being dedicated or purchased as permanent open space, and on the habitat's being protected by fences and berms.
- 25.
- 26.
27. The amount of noise impacts would depend on the fill requirements and the type of construction and the time it took, but the impact would be substantially less than that attributed to Marin Mall - perhaps about half as much. Visual impact also would be substantially less because only half the site would be developed, providing a much larger open space which could be combined with the open space/wildlife reserve. (This, of course, assumes that future development does not occur on the open half of the site.)
- 34.
35. ALTERNATIVE NO. 3
- 36.
37. Light industry development would create 330 construction jobs for 2 years, with an estimated payroll of \$12.4 million. Permanent employment is projected at 650 jobs; some would be new but many would be transfers from other locations. The impact on the housing market is unpredictable. A less than significant impact on local retailing is seen because most industrial workers do not engage in business lunches or noon hour shopping trips.
- 43.
44. Annual property tax revenues to Corte Madera should be approximately \$134,000, based on an anticipated assessed valuation of \$9,800,000 for the
1. 650,000 square feet of light industrial development projected. Sales tax revenues of approximately \$97,500 per year also could be anticipated plus
3. other revenue of approximately \$10,000, for a total of \$241,500 per year in increased revenues to the Town. Annual public service costs are estimated
5. to be \$270,565, covering police and fire protection and public works maintenance costs.
- 7.
8. Light industrial development on 45.5 acres could consume 152 billion BTU annually, although variations of plus or minus one-third could occur depending on the type of industry occupying the site. Assuming one employee per 11,000 square feet and 25 gallons of sewage per employee, 16,000 gallons of sanitary waste, or less than two percent of the District's current daily capacity, would be produced by this alternative. Assuming that water will not be used for industrial purposes, the projected number of employees would require about 38 acre feet annually. The impact of this alternative on storm drainage and wildlife habitat would be about the same as that for the residential alternative. Traffic impacts for the industrial alternative would be about the same as for the office alternative. Noise impacts would depend on the amount of fill required for the development and the number of trucks needed for haul. Visual impacts would be similar to those created by Marin Mall insofar as site coverage is concerned, but building heights would be about half those of the proposed department stores.
- 23.
24. ALTERNATIVE NO. 4
- 25.
26. The development of a mixed retail and office complex on the site would create 270 direct construction jobs for 2 years with an estimated payroll of \$10 million. Permanent employment would reach 440 office jobs and 680 retail jobs. The development might draw store tenants away from Corte Madera Center, or at least lower sales levels there and in other competing shopping centers. The degree of impact would depend on the quality of the new retail space, the types of tenants attracted, and market conditions at the time of development.
33. A positive effect on local retailing would result from noon hour shopping.
- 34.
35. Annual property tax revenues to Corte Madera are estimated at \$103,790, based on a projected assessed valuation of \$7,466,882, for 285,000 square feet of miscellaneous retail stores and 200,000 square feet of offices. Sales tax revenues of \$223,500 per year are projected for this alternative, and other revenues of \$19,410, for a total of \$346,700 in annual revenues to the Town. Annual public service costs are estimated to be \$270,565 for police and fire protection and public works costs.
- 42.
43. Annual consumption of electricity is estimated at 8.7 billion BTU for stores, 8.2 billion BTU for offices, 4.7 billion BTU for the restaurants, and 1.0 billion BTU for the theater, totalling 22.6 billion BTU. Natural gas consumption

1. could amount annually to 7.7 billion BTU in stores and 12.2 billion BTU in offices. Sanitary wastes are expected to be 53,000 gallons per day, or only 3.10 percent less than Marin Mall's production. This combination of uses would require about 40 acre feet of water supply annually, or about 60 percent of the Marin Mall need. The impact of this alternative on storm drainage would be the same as that for the residential alternative. Evening peak 7. hour traffic generated by mixed retail and office developments to the freeway 8. 15 percent less than that of Marin Mall. The improvements to the freeway 9. interchanges, streets, bicycle and pedestrian circulation, and new transit 10. routes needed to serve the shopping center also would be required by this 11. alternative.
- 12.
13. Wildlife habitat impacts would roughly equal those of Marin Mall, and noise 14. and visual impacts also would be about the same.
- 15.
16. ALTERNATIVE NO. 5
- 17.
18. Office, light industry, and warehousing uses of this alternative are expected 19. to have a favorable impact on local retail trade. On-site employment during 20. construction is estimated at 265 for 2 years, with a \$9.9 million payroll. The 21. industrial and distribution firms are projected to employ 400 and the offices 22. 400 persons. Not all of these jobs would be new in the county, and the im- 23. pact on housing cannot be predicted.
- 24.
25. Annual property tax revenues to Corte Madera are estimated at \$110,903, 26. based on a projected assessed valuation of \$7,967,149 for the 160,000 square 27. feet of office space and 400,000 square feet of light industrial space. Sales 28. tax revenues of approximately \$57,950 per year and other revenues of ap- 29. proximately \$10,150 are estimated, for a total of \$178,903 in annual revenues 30. to the Town. Annual public service costs are estimated to be \$270,565 for 31. police and fire protection and public works maintenance costs.
- 32.
33. Office uses are expected to consume electricity in amounts of 4.0 billion BTU 34. annually for heating and 2.4 billion BTU for cooling. Natural gas consump- 35. tion could reach 9.7 billion BTU per year. Industrial uses might use 86.0 36. billion BTU of energy annually, although great variations are possible as 37. noted for Alternate 3. Sanitary wastes are forecast at 23,500 gallons per day, 38. or about 2.4 percent of the District's capacity. If industrial processing used 39. no water, about 30 acre feet of water would be required annually. Storm 40. drainage impacts would be the same as for the residential development al- 41. ternative.
- 42.
43. Evening peak hour traffic volume would be 37 percent of that projected for 44. Marin Mall. The impact on wildlife habitat would be similar to that caused 45. by the residential alternative. Noise impacts would depend mainly on the

1. amount of fill hauled and the type of construction and the time it took. Vi- 2. sual impact would be about the same as for the industrial alternative.
- 3.
4. ALTERNATIVE NO. 6
- 5.
6. A developed open space recreation park alternative could attract visitors 7. to Corte Madera which might benefit local retail stores and restaurants, 8. particularly on weekends. Construction in one year would provide 27 jobs, 9. but the number of permanent operating and maintenance employees has 10. not been established.
- 11.
12. It is not possible to predict with any certainty, the cost to the Town of 13. acquiring the entire 50.27 acre Marin Mall site. The property currently 14. is appraised at \$2,400,000, or approximately \$1.10 per square foot. 15. The owners of the 12 Tax Assessor's parcels which comprise the site 16. might claim that the property has a highest and best use as a shopping 17. center and should be valued accordingly.
- 18.
19. Capital costs to improve the site with landscaping, a play field, picnic 20. tables, tennis courts, a recreation building and swimming pool, and 150 21. parking spaces are estimated at \$2,000,000.
- 22.
23. If the site is purchased at a price equal to its current market value of 24. \$2,400,000, and if a 30 year, 8 percent bond issue were used to finance 25. the purchase and capital improvement costs, debt service on the \$4,400,000 26. bond issue would amount to approximately \$388,000 per year. In addition, 27. \$8,340 in property tax revenue currently generated by the site would be 28. lost to Corte Madera, and \$58,728 in property tax revenues would be lost 29. to other jurisdictions within the county because of the removal of the 30. \$2,400,000 parcel from the tax roll.
- 31.
32. No need for full time additional fire fighting personnel or equipment is 33. anticipated. One additional sworn police officer would be required at 34. an annual salary of \$22,320, plus \$500 for equipment. Landscaping and 35. park maintenance are estimated at \$1,500 per acre per year or \$76,500. 36.
37. A recreation center manager, one assistant, and a full time life guard 38. would require approximately \$30,000 per year in salaries and benefit 39. expenses. Street maintenance is estimated at \$7,500 per year; on site and 40. off site street lighting at \$5,000 per year; and recreation center main- 41. tenance costs at \$2,500 per year. The total annual estimated cost would 42. be \$540,340.
- 43.
- 44.
- 45.

R

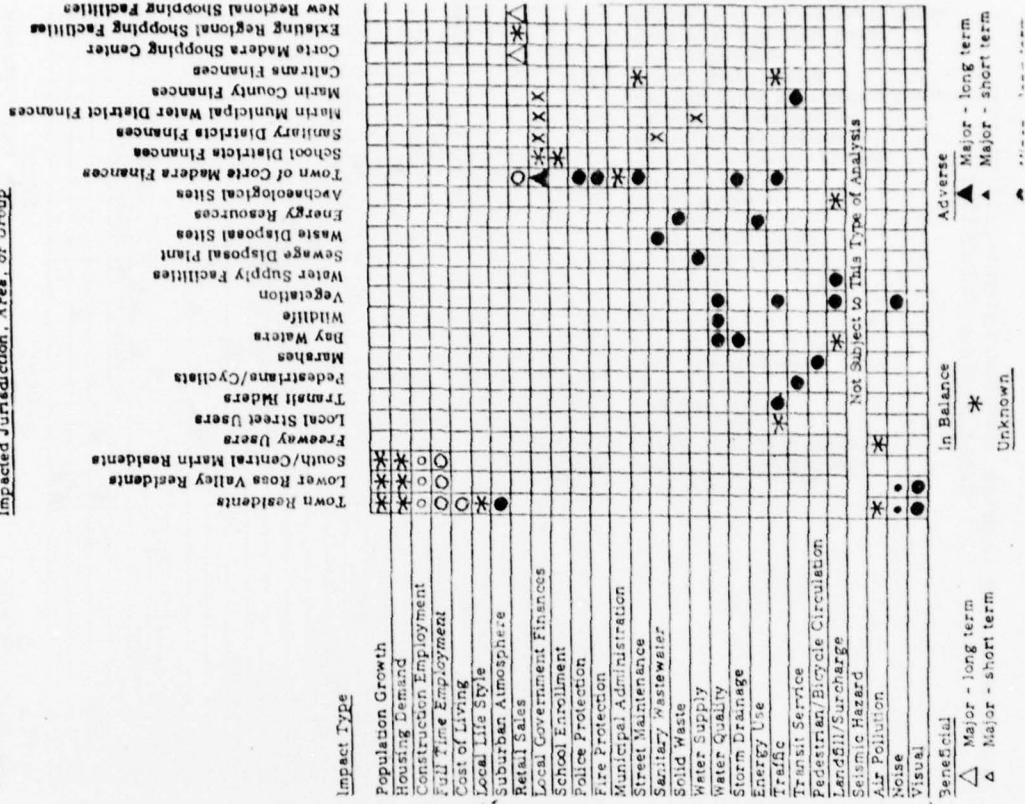
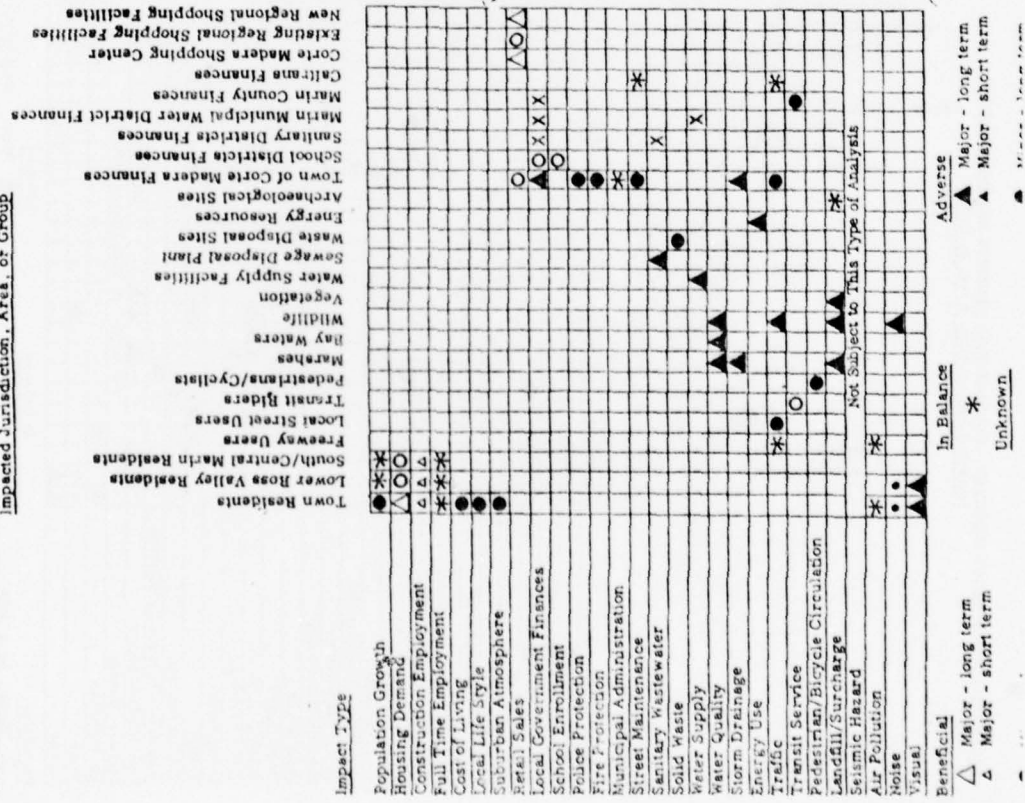
1. Based on a \$1.00 daily user charge and 300 days of operation per year, an average of 1,800 visitors per day would be required before the recreation park would "break even" financially on a user fee basis. This does not appear to be a realistic possibility. The 1976 Corte Madera budget allocates \$621,126 to the Town's Recreation Department out of a total budget of \$1,607,167 (3.9 percent). The 1985 budget is projected to be between \$2.8 million and \$3.1 million, and the cost of the developed open space alternative would be between 8.17 and 19 percent of the total budget. Whether or not the entire burden of park acquisition and development costs would fall directly on Corte Madera taxpayers would depend on the availability of loans or grants from other sources.
11. Another possibility is that the site might be acquired and operated by the Marin County Open Space District.
13. Energy usage might be 12 billion BTU annually for electricity and could reach 1.0 billion BTU for natural gas. Irrigation of the landscaped areas would be the major water use for this alternative, requiring about 100 acre feet annually. This could be reclaimed sanitary waste water, of which 9,000 gallons per day would be produced on the site. With minor site modifications, open drainage ditches could be utilized, and this alternative would have no storm drainage impact other than a 40 percent reduction in the existing ponding capacity.
21. The amount of traffic generated would be relatively small, especially during the evening peak hour. No improvements to streets would be necessary, except that pedestrian, bicycle, and transit facilities would be needed.
26. Recreation use of the site would not preserve existing natural wildlife habitat. However, playfields and seasonal recreation facilities could be designed so as to withstand occasional flooding, and consequently fill above the present grade could be minimized. Engineered fill would be required under structures and permanent recreation facilities.
32. An important aspect of the developed open space alternative is the potential it would offer for a large regional recreation-open space facility in this portion of Marin County. The northern portion of the site would be retained in natural open space, as would the Heerdt Marsh and major portions of the Muzzi property. If the 60 acres of the Muzzi property now being used as a depository for dredging spoils from the Larkspur Ferry Terminal site were also used for park land, there would be more than 400 acres of contiguous open space to be used as a combination of recreation park, natural habitat, and visual open space.
41. natural habitat, and visual open space.
42. natural habitat, and visual open space.
43. natural habitat, and visual open space.
44. natural habitat, and visual open space.
45. natural habitat, and visual open space.

BASE CASE: NO DEVELOPMENT

1. BASE CASE: NO DEVELOPMENT
2. Realistically, no development should be regarded as a transitory "status quo" alternative, pending determination of other uses for the site. In the meantime, all impacts would be nil. However, local residents would continue to shop elsewhere for department store and comparison goods, and the Town presumably would continue to haggle over the future of the site.
8. site.
9. Owners would continue to pay taxes which are currently \$8,340 to the Town and \$58,728 to other jurisdictions. However, if the property continued to lie fallow, the owners justifiably could ask to have their assessments reduced, with a possible resulting drop in local tax revenues.
13. Sedimentation would continue to deteriorate the quality of the marsh as a wildlife habitat.
16. Life habitat.
17. Life habitat.
18. Life habitat.
19. Life habitat.
20. Life habitat.
21. Life habitat.
22. Life habitat.
23. Life habitat.
24. Life habitat.
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40. Life habitat.
41. Life habitat.
42. Life habitat.
43. Life habitat.
44. Life habitat.
45. Life habitat.

ALTERNATIVE NO. 1. RESIDENTIAL SYNTHESIS OF BENEFITS AND DISBENEFITS
Impacted Jurisdiction, Area, or Group

ALTERNATIVE NO. 2. OFFICES SYNTHESIS OF BENEFITS AND DISBENEFITS
Impacted Jurisdiction, Area, or Group



ALTERNATIVE NO. 4, RETAIL/OFFICE: SYNTHESIS OF BENEFITS AND DISBENEFITS
Impacted Jurisdiction, Area, or Group

Impact Type

Population Growth
Housing Demand
Construction Employment
Full Time Employment
Cost of Living
Local Life Style
Suburban Atmosphere
Retail Sales
Local Government Finances
School Enrollment
Police Protection
Fire Protection
Municipal Administration
Street Maintenance
Sanitary Wastewater
Solid Waste
Water Supply
Water Quality
Storm Drainage
Energy Use
Traffic
Transit Service
Pedestrian/Bicycle Circulation
Landfill/Surcharge
Seismic Hazard
Air Pollution
Noise
Visual

Beneficial
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

In Balance
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

Adverse
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

Not Subject to This Type of Analysis

Impact Type

Population Growth
Housing Demand
Construction Employment
Full Time Employment
Cost of Living
Local Life Style
Suburban Atmosphere
Retail Sales
Local Government Finances
School Enrollment
Police Protection
Fire Protection
Municipal Administration
Street Maintenance
Sanitary Wastewater
Solid Waste
Water Supply
Water Quality
Storm Drainage
Energy Use
Traffic
Transit Service
Pedestrian/Bicycle Circulation
Landfill/Surcharge
Seismic Hazard
Air Pollution
Noise
Visual

Beneficial
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

In Balance
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

Adverse
△ Major - long term
△ Major - short term
△ Minor - long term
△ Minor - short term
△ Unknown

Not Subject to This Type of Analysis

ALTERNATIVE NO. 5, OFFICE/LIGHT INDUSTRY: SYNTHESIS OF BENEFITS AND DISBENEFITS.
Impacted Jurisdiction, Area, or Group

The figure consists of two identical impact matrices side-by-side. Each matrix has 15 rows representing different impact types and 25 columns representing various project components. The impact types are: Population Growth, Housing Demand, Construction Employment, Full Time Employment, Cost of Living, Local Life Style, Suburban Atmosphere, Retail Sales, Local Government Finances, School Enrollment, Police Protection, Fire Protection, Municipal Administration, Street Maintenance, Sanitary Wastewater, Solid Waste, Water Supply, Water Quality, Storm Drainage, Energy Use, Traffic, Transit Service, Pedestrian/Bicycle Circulation, Landfill/Surcharge, Seismic Hazard, Air Pollution, Noise, and Visual. The project components are: Town Residents, Lower Rosa Valley Residents, South/Central Martin Residents, Freeway Users, Local Street Users, Transist Riders, Pedestrians/Cyclists, Bay Waters, Wildlife, Vegetation, Water Supply Facilities, Sewage Disposal Plant, Waste Disposal Sites, Archaeological Sites, Town of Corte Madera Finances, School Districts Finances, Sanitary Districts Finances, Martin Municipal Water District Finances, Martin County Finances, Corte Madera Shopping Center, Existing Regional Shopping Facilities, and New Regional Shopping Facilities. The matrix cells contain symbols: solid black circles (●) for 'Major - long term', solid black triangles (▲) for 'Major - short term', open triangles (△) for 'Major - long term', open triangles (△) for 'Major - short term', and asterisks (*) for 'Unknown'. A vertical line separates the two matrices, and a horizontal line separates the impact types from the project components. A legend at the bottom right explains the symbols.

BASE CASE, NO DEVELOPMENT: SYNTHESIS OF BENEFITS AND DISENEMENTS
Impacted Jurisdiction, Area, or Group

Impact Type	Town Residents	Lower Rose Valley Residents	South/Central Marin Residents	Freeway Users	Local Street Users	Transit Riders	Pedestrians/Cyclists	Marshes	Bay Waters	Wildlife	Vegetation	Water Supply Facilities	Sewage Disposal Plant	Waste Disposal Sites	Energy Resources	Archaeological Sites	Town of Corte Madera Finances	School Districts Finances	Sanitary Districts Finances	Marin Municipal Water District Finances	Marin County Finances	Caltanes Finances	Corte Madera Shopping Center	Extending Regional Shopping Facilities	New Regional Shopping Facilities	
Population Growth	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Housing Demand	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Construction Employment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Full Time Employment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cost of Living	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Local Life Style	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Suburban Atmosphere	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Retail Sales	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Local Government Finances	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
School Enrollment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Police Protection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fire Protection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Municipal Administration	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Street Maintenance	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sanitary Wastewater	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Solid Waste	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Water Supply	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Water Quality	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Storm Drainage	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Energy Use	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Traffic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Transit Service	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Pedestrian/Bicycle Circulation	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Landfill/Surcharge	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Seismic Hazard	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Air Pollution	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Noise	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Beneficial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Adverse	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
In Balance	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Major - long term	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Major - short term	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Unknown	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Not Subject to This Type of Analysis

Adverse

Major - long term

Major - short term

Unknown

APPENDIX F

**COMMENTS AND RESPONSES CONCERNING
THE PROPOSED FINAL ENVIRONMENTAL STATEMENT**

PLEASE NOTE:

**IN EACH CASE THE RESPONSE(S)
FOLLOW THE FIRST PAGE OF THE COMMENT LETTER.**

APPENDIX F

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APPENDIX F

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94111

Project No. PF-COE-K80006-CA

H. A. Flertzheim, Jr., Colonel
District Engineer
U.S. Army Corps of Engineers
100 McAllister Street
San Francisco, California 94102

JUL 15 1977

Dear Colonel Flertzheim:

The Environmental Protection Agency has received and reviewed the Proposed Final Environmental Impact Statement for Hahn Shopping Center, Corte Madera, California.

The proposed final EIS does not demonstrate that the site selected is the least environmentally damaging alternative. 40 CFR 230.5(b)(8)(ii)(a), provides in part that "discharge of fill material in wetlands shall not be permitted unless the applicant clearly demonstrates the following: (emphasis added) (a) the activity associated with the fill must have direct access or proximity to or be located in, the water resources in order to fulfill its basic purpose, or that other site or construction alternatives are not practicable;"

The environmental statement does not discuss alternative sites for the regional shopping center considering appropriate use of wetlands. Such a discussion should be included in the final EIS, specifically in accordance with the provisions of 40 CFR 230.5(b)(8)(ii)(a).

EPA appreciates the opportunity to comment on this Proposed Final Environmental Statement and requests two copies of the Final Environmental Statement when available.

If you have any questions regarding our comments, please contact Patricia Sanderson Port, EIS Coordinator, at (415) 556-6266.

Sincerely,

Patricia Sanderson Port
Paul De Falco, Jr.
Regional Administrator

cc: Council on Environmental Quality

F-1

DOCUMENT F-1

RESPONSES TO COMMENTS BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

1. The proposed activity would take place on historic wetlands behind dikes. The vast majority of the lands to be filled are now dry. The northernmost portion of the site contains an area of seasonal wetland, but only a portion of this would be filled. The portion of the seasonal wetland area which is probably the most valuable in terms of wildlife, the northernmost area, will be preserved for wildlife purposes (please refer to Section 1.38 for details).
2. A discussion of alternate sites considered by the applicant is now included in Appendix A (Document A-27). Among the reasons which rules out other sites for the applicant are prohibitive cost, poor access, lack of adequate space, and poor visibility.

F-2



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

REGION NINE

Two Embarcadero Center, Suite 530
San Francisco, California 94111

ALABAMA
CALIFORNIA
DISTRICT
HAWAII
ILLINOIS
INDIANA
IOWA
KANSAS
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW YORK
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
RHODE ISLAND
SOUTH CAROLINA
SOUTH DAKOTA
Tennessee
Texas
UTAH
VERMONT
VIRGINIA
WASHINGTON
WEST VIRGINIA
WISCONSIN
WYOMING

July 29, 1977
J. M. A. 10
HED-09

Colonel H. A. Flertzhelm, Jr.
San Francisco District Engineer
U.S. Army Corps of Engineers
211 Main Street
San Francisco, California 94105

Dear Colonel Flertzhelm:

We have reviewed the proposed Final Environmental Impact Statement for the Hahn Shopping Center in Corte Madera, Marin County, California, and have identified three areas of concern.

1. Obsolete data: The discussion in Sections 2.105 and 2.106 provide traffic volumes based on 1971 traffic, list as present construction a project completed in December 1974, and do not address the high-occupancy-vehicle (HOV) lanes currently in operation.
2. Possible transit conflict: Plate 3 shows the parking lot extending into the abandoned N.P.R.R. right-of-way. A corridor transit study is being undertaken for Marin County which could propose the use of the abandoned right-of-way as a transit corridor.

Although Caltrans would have condemnation rights, future complications could be avoided if this matter was coordinated at this time.

3. Need for traffic interchange commitment: Section 3.10g states that the project could not be developed until associated traffic projects are completed to the point necessary to facilitate the proposed development. To date, no commitment to build the necessary interchange has been granted.

The above comments have been coordinated with the California Department of Transportation. In order to resolve these concerns it is recommended that a meeting be held involving your office, FHWA staff, and Caltrans personnel. Please contact Mr. D. L. Eyras, FHWA District Engineer, California Division Office at 448-3541 (FIS) or 916-440-3541 (Commercial) to arrange for such a meeting.

F-3

DOCUMENT F-2

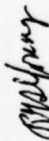
RESPONSES TO COMMENTS BY THE FEDERAL HIGHWAY ADMINISTRATION

1. The traffic analysis presented in this FES has been updated. The primary source document used was the Livingston and Associates' EIR (June 1977).
2. A potential conflict does exist. The developer has indicated his willingness to study plans which would not include the right-of-way.
3. Comment noted.

F-4

We appreciate this opportunity to review the subject proposed Final Environmental Impact Statement and would like to receive two copies of the Final Statement when it becomes available.

Sincerely yours,



R. G. S. Young, Director
Office of Environment and Design

2

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY

DEPARTMENT OF TRANSPORTATION

P. O. BOX 3346 BAYVIEW
SAN FRANCISCO 94119
(415) 557-1440

June 24, 1977

04-Mrn-101

Col. H. A. Flertzheim, Jr.
Department of the Army
San Francisco District,
Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Col. Flertzheim:

This is in response to your May 9, 1977, referral of a Proposed Final Environmental Impact Statement and Notice of Public Hearing for the Mahan Shopping Center (Marin Mall Regional Shopping Center) in Corte Madera, Marin County, California.

We have reviewed the Proposed Final Statement and have the following comments.

Caltrans' previous comments on this proposed shopping center complex were contained in the Resources Agency's letter of April 10, 1974, (your Appendix Letter D-7) and a September 28, 1976, letter to the Town of Corte Madera (copy attached) regarding the Town's Marin Mall Shopping Center DEIR. It is noted that some of our comments have been incorporated into this Proposed Final Statement.

Under Section 2, Environmental Setting without the project, Vehicular Circulation, the widening noted as "presently under construction" was completed in December, 1974. The section with regard to Route 101 does not reflect existing conditions as they have existed since completion of the widening project. In particular, in Sections 2.101 and 2.106 on page 33 of the statement, it should be noted that Mrn-101 is an 8-lane freeway from the Golden Gate Bridge to the Corte Madera Creek Bridge. Auxiliary lanes exist in both directions between the Alto interchange and Tamalpais interchange. The #1 lane in each direction is an exclusive HOV lane during its respective peak period from the Richardson Bay Bridge to north of the Tamalpais interchange.

P-5

P-6

DOCUMENT P-3



RESPONSES TO COMMENTS BY THE CALIFORNIA STATE DEPARTMENT OF
TRANSPORTATION

1. Comment noted. The traffic sections of this final environmental statement have been substantially revised and updated.
2. This document now contains updated traffic data. Plate 8 is still included, but is now clearly labeled as presenting conditions as they were in 1971 and 1972.
3. The applicant's current plans do include use of a portion of the railroad right-of-way for parking and roadway.
4. Comment noted. Later correspondence from Cal-Trans (please see Document A-33) indicates that the subject corridor study has been approved.
5. Comment noted.
6. Timing is an important consideration here. If the District and MTC have reached conclusions and have a firm position, then they should advise the Corps of this in their final environmental statement comments. Their comments will of course be taken in consideration as part of the permit review process. If they have no firm plans by the time the final ES is published, then they may want to provide comments in the form of recommendations.
7. The traffic data in this document has been updated. The document now states that there are no firm plans to carry out any of the recommended road improvements. This document analyzes impacts of the project on existing conditions (no road improvements), and this can essentially be viewed as a worst case situation.
8. Appendix C remains as part of this document, but primarily only to describe town policy. There are currently no firm plans to carry out any of the recommended roadway improvements.
9. This is correct. The town of Corte Madera would not allow the shopping center to be used until the associate traffic projects were completed to the point necessary to facilitate the proposed development.
10. The applicant has been advised of this request. A later letter from Cal-Trans again mentions concerns over drainage problems and nearby Highway 101 (Document A-33).

PLEASE SEE DOCUMENT A-33, APPENDIX A, FOR LATER CORRESPONDENCE
FROM CAL-TRANS

P-7

H. A. Flertzhelm
Page 2
June 24, 1977

It is noted that existing traffic data (see 2.105, page 33 and plate 8) are based on '71-'72 traffic figures. The Rte 101 data are based on the 1971 traffic volumes. These figures should, in our opinion, be updated.

Section 2.121, on p. 36, deals with Public Transit and is primarily concerned with the Golden Gate Bridge and Highway District's efforts which include "Future studies involving the use of U.S. 101, the Northwestern Pacific Railroad or a combination thereof". It is noted that the proposed shopping center parking lot and San Clemente Drive extension plan to utilize the abandoned NWP Railroad right-of-way. The Northwestern Pacific Railroad has just recently proposed abandonment of its right-of-way all the way to Ignacio.

Caltrans recently completed a report on that proposed abandonment from Detour in Corte Madera, just north of the proposed Hahn Development to Ignacio. Because of requests from Marin County and various Marin Cities, the report recommended that a transportation corridor study be conducted in the 101 corridor from the Golden Gate Bridge to Route 37. Said study will identify future transportation needs in the corridor and determine the feasibility of utilizing the abandoned railroad rights-of-way.

In view of the proposed utilization of a portion of the abandoned right-of-way for the shopping center development, it could foreclose future use of the right-of-way for transportation purposes. If the development is implemented as planned, the State could exercise rights of eminent domain. This may not be in the best interests of the local citizens and the developer.

The State Board of Transportation has recommended that the District and MTC proceed with the transportation corridor study. The first phase will: (1) Determine whether the proposed abandonment between Detour and Ignacio is desirable; and (2) If desirable, determine the need for and feasibility of utilizing the abandoned railroad rights-of-way for alternative transportation uses.

In our opinion, the effect of this action should be evaluated.

P-8

H. A. Flertzheim
Page 3
June 24, 1977

Under Section 4, Impact on Vehicular Circulation, several improvements are noted which should be implemented but there is no detail, either directly or by reference, as to the improvements necessary, the magnitude of the changes to the vehicular circulation, the timing of the improvements and their relationship to the construction of the shopping center project, or the feasibility of accomplishing these projects in a timely manner in view of the economic and political realities. Recommendations are cited as having been made, but are not referenced in the document. Impacts on the surface streets may result in severe deterioration of service. However, in view of the out-of-date material on existing conditions, it is unclear whether the impact on Route 101 presents a true picture. The 800 additional trips on NB Route 101 during the PM peak period would add, according to our analysis, eight to nine minutes to motorists' driving time (if the highway remains congested.) In our opinion this should be clarified in the statement.

The summary of the Circulation element of the Town of Corte Madera General Plan, Appendix C, is cited as pertinent to roadway improvements and methods of financing. The reference appears to present policies and lists sources of financing, but these general policies have not been related to the specific shopping center project. The policy does note that any major development which would cause significant traffic increases must obtain a commitment for freeway interchange improvement before final approval is granted for the development. The proposed FEIS has shown major impacts but does not appear to show any commitments or proposals to mitigate these impacts.

We also note, in Section 3.10, Land Use Element of Town's General Plan, under item "g", that "No occupancy permit is to be granted for any development until the associated traffic projects have been completed to the point necessary to facilitate the proposed development".

As indicated in our September 28, 1976, letter to the City, it is requested that Caltrans, District 4, be given an opportunity to review and comment on grading and drainage plans for the project, prior to approval of such plans, in order that we may evaluate the effect, if any, on State highway drainage conditions.

H. A. Flertzheim
Page 4
June 24, 1977

Thank you for the opportunity to comment on this Proposed FEIS. We would appreciate receiving a copy of the Final EIS.

Sincerely yours,

T. R. LAWTERS
District Director

By *B. C. Bachtold*
B. C. BACHTOLD
Deputy District Director

Attachment

DEPARTMENT OF TRANSPORTATION

P. O. BOX 2204
SAN FRANCISCO 94119
(415) 397-1840



September 28, 1976

4-Mrn-101

Mr. Jerry Heath
Planning Director
Town of Corte Madera
P. O. Box 159
Corte Madera, CA 94925

Dear Mr. Heath:

This is in response to your referral of your Draft Environmental Impact Report (DEIR) for Marin Mall Regional Shopping Center.

We have reviewed the DEIR and consider it to be generally adequate insofar as functions and responsibilities of the Department of Transportation are concerned, subject to following comments.

Improvements at the Greenbrae Interchange include a second exclusive left turn lane for eastbound to northbound on-ramp traffic, rather than westbound to northbound as stated on Page 48, Appendix 6. Also, for purposes of intersection capacity analysis, the northbound off-ramp at Sir Francis Drake Boulevard should be considered as one through movement lane and one mandatory right turn lane.

Short term improvements at the Fifer Avenue-Nellen Avenue-U.S. 101 Interchange (as mentioned on Page 52, Appendix 6), include development of the southbound freeway off-ramp at Fifer Avenue to two lanes for \$1,000 construction cost (Item 7, Table 9, Page 65, Appendix 6). The ramp length (approximately 350 feet) is considered to be too short to provide directional turning lanes at the ramp terminus.

With regard to the pedestrian overcrossing alternatives discussed on Pages 54, 55 and 56, Appendix 6, it should be mentioned that a formal agreement with Caltrans will be required covering details of any such work. Also, it should be mentioned that an Air Rights Lease must be obtained from the Department of Transportation for any shopping mall development on the portion of a pedestrian bridge within the State Highway Right of Way.

The proposal (Page 59, Appendix 6) to relocate the northbound Route 101 bus stop to a point in the vicinity of the proposed diagonal on-ramp, will not be approved for safety reasons. A new and undesirable point of weaving conflict would be introduced between buses heading for the bus stop and traffic entering the Freeway from the existing loop on-ramp.

P-11

Mr. Jerry Heath
Page 2
September 26, 1976

On Page 66, Appendix 6, there is a statement that "The project that could be jointly financed by Caltrans, and Corte Madera, in addition to the developer, would be reconstruction of the Tamalpais Drive Interchange." It should be mentioned that there is only slight possibility that Caltrans will be in a position to participate in the financing of the reconstruction, due to limited availability of funds and demands of higher priority needs elsewhere.

On Page 67, Appendix 6, there is a statement that "The cost of maintenance of the two proposed signals at Tamalpais Drive Interchange would be borne by Caltrans." This statement is in error. The signal maintenance costs would be borne by Caltrans and by the local governments having jurisdiction over the City streets involved; the division of cost being based on the proportionate number of legs of streets entering the intersection.

The second paragraph on Page 43, Appendix 6, should be brought up to date to indicate that in June, 1976, the bus lanes were opened to carpools with consequent increase in the effective capacity of the freeway.

The DEIR indicates that detailed capacity analyses were developed for certain critical intersections. It is our opinion that the analyses should be included in the DEIR.

In Chapter IV of Appendix 6, the future levels of service of streets in the vicinity of the project are estimated on the basis of projected traffic volumes. These levels of service estimates appear to be based on street capacities rather than intersection capacities. The capacity of a street network is usually dependent entirely on the capacities of the intersections within the network. Data showing the level of service of a street segment is likely to result in an overrating of the operating characteristics of the street network.

Since it is probable that the Greenbrae Ferry Terminal will be in operation before the opening of the proposed shopping center, the DEIR should include terminal traffic in the existing traffic condition when discussing the effect of shopping center traffic on the Greenbrae interchange.

P-12

Mr. Jerry Heath
Page 3
September 28, 1976

It is requested that we be given an opportunity to review and comment on grading and drainage plans for the proposed shopping center development, prior to approval of such plans by the City. We wish to evaluate the effect, if any, on State Highway drainage conditions.

Sincerely yours,

T. R. LAVERS
District Director

By *[Signature]*
B. C. BACHTOLD
Deputy District Director

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

DEPARTMENT OF HEALTH

714 P STREET
SACRAMENTO, CALIFORNIA 95814
(916) 445-4408

EDMUND G. BROWN JR., Governor



June 9, 1977

Colonel H.A. Flertzhelm, Jr.
District Engineer
U.S. Army Corps of Engineers,
San Francisco District
211 Main Street
San Francisco, CA 94105

Dear Colonel Flertzhelm:

PROPOSED FINAL ENVIRONMENTAL STATEMENT, MAHM SHOPPING CENTER, CORTE
MADERA, MARIN COUNTY, CALIFORNIA

Review of the above subject document has been completed.

Paragraph 1.33 describes a solution to the storm water problem. The referenced documents A-10 and A-11 of appendix A refer to a 30-acre site that will continue to serve as a peak runoff storage area. This storage technique may become an unacceptable mosquito problem. Whether or not mosquitoes become a problem will depend on such factors as time of year, length of storage and depth of pond. Other additional factors exist.

Presently the Department is working cooperatively with the San Francisco Bay Regional Water Quality Control Board staff and coast region mosquito abatement agencies to develop criteria and guidelines for wastewater conveyance, storage and reuse. These guidelines should be available in the near future and adhered to in the final EIR and design phase of the project.

Paragraph 1.38 describes the intended breaching of dikes on a dredge disposal site and allowing the area to be activated as a tidal marshland. Some preliminary ditching or grading may have to be done prior to cutting the levee so as to prevent mosquito problems. The design plan should be coordinated with the local mosquito abatement district to minimize the mosquito potential.

Paragraph 1.42 Fish and Wildlife Mitigation - the habitat management program for the 28.5 acre mitigation area should be coordinated with and be subject to needs of the local mosquito abatement district. At least

RESPONSES TO COMMENTS BY THE CALIFORNIA STATE DEPARTMENT OF HEALTH

1. The 30 acres referred to would store water only during the winter rainy season when mosquitos are normally dormant. The water would be released almost immediately and so would not present a continuing problem. During normal periods the situation would be similar to the existing conditions.
2. The applicant has been furnished a copy of your letter and is now aware of these guidelines and of his responsibility to the local mosquito abatement district.
3. The subject paragraph does not describe work which is part of the Marin Mall project. The activity described is part of the Larkspur Ferry terminal project, now completed.
4. Comment noted.

F-15

Colonel H.A. Flertzheim, Jr. -2-

June 9, 1977

one other management plan has recently been cooperatively worked out between the necessary agencies such as Fish and Game and Mosquito Abatement.

The Department recommends that the above concerns be recognized and incorporated into the final EIR.

Sincerely,

VECTOR AND WASTE
MANAGEMENT SECTION

Reuben Junkert
Reuben Junkert, P.E.
Associate Sanitary Engineer

cc: R.F. Peters, Chief VMMS
E.W. Mortenson, VMMS Berkeley
Marin-Sonoma MAD

F-16



MARIN MUNICIPAL WATER DISTRICT

June 15, 1977
File 090.3.3

Colonel H. A. Flertzhelm, Jr.
Department of the Army
San Francisco District
Corps of Engineers
211 Main Street
San Francisco, CA 94105

Re: Proposed Final Environmental Impact Statement -
Hahn Shopping Center, Marin Mall, Corte Madera

Dear Colonel Flertzhelm:

The section on water service in the Proposed Final EIS on Hahn Shopping Center may be based on 1974 information, and consequently should be updated. For future reports, we will provide you with current information if you will contact us before the report is prepared.

An Environmental Impact Report on this same site has been prepared by Livingston and Blaney, Consultants. That report and our responses of August 31, which should be available in their Final EIR this month, accurately describes Marin Municipal Water District's moratorium and water supply, and service to the site. A copy of sections from the report and our response are attached for your use.

We are aware that the site is on bay mud, and would require assurance of stable access for our water facilities.

The following is our review of the Proposed Final EIS for Hahn Shopping Center.

- 2.57 (Page 23) Marin Municipal Water District's population estimate has been revised downward to about 169,600. The District has no adopted policy "to risk water shortage once in every 30 years." An existing moratorium on new connections and construction of the Soulaquale Reservoir have been efforts to both control and eliminate the deficit. Our planning efforts have been to provide water to meet the growth projections of the Countywide Plan.

F-17

DOCUMENT F-5

RESPONSES TO COMMENTS BY MARIN MUNICIPAL WATER DISTRICT

1. Sections 2.49 thru 2.52 and 4.42 (now 4.39) thru 4.43 (now 4.40) have been updated to include information provided by the MWD.
2. The text has been updated.
3. The fill design for the proposed project would incorporate and provide for safe and stable access for all utility connections. All plans for the utility work would have to be scrutinized and approved by the Town and other various controlling public agencies prior to any construction. All design work of the utilities would be prepared by reputable licensed engineers.
4. Comment noted, text has been revised accordingly.
5. Comment noted.
6. Comment noted, text now acknowledges this.
7. The attachments to MWD's letter follow.
8. Section 8.00 has been revised to include this comment.

F-18

June 15, 1977
Page 2

5 2.58 The Interim to North Marin for Russian River water is complete and operational.

6 2.59 In the case of Swanson versus MWD (56CA3d512) on March 25, 1976, the Court of Appeals upheld the MWD moratorium. The Supreme Court denied a hearing on May 19, 1976. The matter is now final.

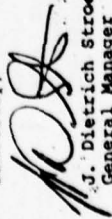
7 4.52 Please see attachments.

5.00
and

8 8.00 Additional water requirements represent an adverse impact and an irreversible commitment of water resources, and should therefore be included in these sections.

We appreciate the opportunity to review this document. If you have questions or need additional information, please contact Jo Duthie, our Environmental Services Coordinator.

Sincerely,


J. Dietrich Stroeh
General Manager

JD:ho

Enclosures

F-19

October 28, 1976
File 090.3.3

Barbara Kautz, Planner
Town of Corte Madera
Town Hall
Corte Madera, CA 94925

Re: Population Revision for Marin Mall Shopping Center - Draft Environmental Impact Report

Dear Ms. Kautz:

In our comments (letter of August 31) on the Marin Mall Shopping Center Draft EIR, we stated that our District population is 183,000. The County Planning Department has reviewed the census and has estimated District population at 169,600 on January 1, 1976. While population growth has slowed or perhaps declined in the past few years, new housing has kept pace with the Countywide Plan because of smaller family size.

We hope the revised population will be used for the Final EIR. If you need additional information or have questions, please call Jo Duthie, our Environmental Services Coordinator.

Sincerely,

J. Dietrich Stroeh
General Manager

JAD:ho

F-20

OC: 23 1976

August 31, 1976
-File 090.3.3

Mr. Jerry Heath, Planner
Town of Corte Madera
Town Hall
Corte Madera, CA 94925

Re: Marin Mall Regional Shopping Center
Draft Environmental Impact Report

Dear Mr. Heath:

We have reviewed the Marin Mall Regional Shopping Center Draft Environmental Impact Report and found the information to be basically correct. This letter is submitted to update and correct the information in the report.

On page II - 24, the District's population should be updated to a 1975-76 estimate of 183,200. County Planning Staff is reevaluating this estimate, and it may be revised downward. Water consumption during 1975-76 was 29,064 acre-feet, down from the previous year's consumption of 32,266 acre-feet. This decline is largely attributed to the rationing program. On the same page, mention should be made of the District's Conservation Program, which is designed to reduce the requirements of consumers within the District.

On page III - 12, consumption at Northgate Mall should be updated to 81 acre-feet per year, as stated in our letter of June 3, 1976. The energy consumption for treatment and distribution of water to the site would be over 40,000 kilowatt hours per year.

The developer may be required to install a separate piping system to make use of reclaimed water for irrigation. In any case, the use of drought-tolerant landscaping would reduce water and energy requirements of the development.

We appreciate the opportunity to review this EIP. If you need additional information, please call Jo Buthe, our Environmental Services Coordinator.

Very truly yours,

J. Dietrich Stroeh
General Manager

JD:cew(0/13)

F-21

AUG 31 1976

June 3, 1976
File 090.3.3

Mr. Roy H. Cofer
Livingston and Associates
City and Regional Planners
40 Gold Street
San Francisco, CA 94133

Re: Water Consumption - Marin Mall Environmental
Impact Report

Dear Mr. Cofer:

As you requested in your May 17 memorandum, we are following your telephone conversations with Bernie Heare with this letter for additional information.

Marin Municipal Water District currently has a moratorium on new water service connections because our supply is overcommitted. The proposed Soulaule project, which would provide 5,000 acre feet of potable water, is currently under environmental review and if approved, will be on the November election ballot.

We are including with this letter a Fact Sheet which explains our existing water situation further.

Under conditions of the moratorium, sites with historical water use are permitted to have the service reactivated for a use equivalent to historical consumption. On the Marin Mall site, historical consumption from a one inch connection amounted to 0.86 acre feet. The Northgate Shopping Center, which is a similar development to the proposed Marin Mall, uses 81 acre feet per year. Therefore, water would not be available to the proposed development until the moratorium is lifted.

At that time, service would probably be contingent upon:

- 1) Use of water conserving fixtures and drought tolerant landscaping, which would reduce the project's consumption and minimize the impacts on District supply; and,

F-22

JUN 7 1976

June 3, 1976
Page 2

- 2) Payment of fees to expand storage capacity to meet District standards for fire and peak demand reserve for the project.

We hope this information will be useful in your study. If you need additional information, please contact Bernie Heare, Manager of Engineering, or Jo Duthie, Environmental Services Coordinator.

Sincerely,

J. Dietrich Stroeh
General Manager

JAD:ho



MEMORANDUM

LIVINGSTON AND ASSOCIATES • CITY AND REGIONAL PLANNERS

DATE: May 17, 1976

TO: Bernie Heare, Manager of Engineering
Marin Municipal Water District

FROM: Roy H. Cofer

SUBJECT: Marin Mall EIR

Our contract with the Town of Corte Madera calls for preparing an EIR on the latest version of a proposed Hahn shopping center called Marin Mall. Specifications are enclosed.

We would like to have any information you might have on water consumption for similar uses in terms of daily gallons per square foot. Comparable figures for the Northgate center would be appropriate.

Over the phone you stated that the Corte Madera - Greenbrae Gravity System is currently below minimum desirable standards for fire and peak demand reserve. I would like to know how many gallons the system is below standard.

I would appreciate it if you could provide your answers over the phone and then follow with a letter as our time schedule is extremely tight. Thank you.

F-23

F-24

Table 1
PROPOSED SPECIFICATIONS:
MARIN MALL REGIONAL CENTER
CORTE MADERA, CALIFORNIA

Location:	Tax Rate Area 2-018
Site Area:	50.27 Acres (2,189,900 S.F.)
Building Areas:	Ownership:
Macy's	180,500 S.F. Macy's to Own Bldg. & Land
Bullock's	142,500 S.F. Bullock's to Own Bldg. & Land
Total Department Store	323,000 S.F.
Developers' Mall Shops	332,000 S.F. Ernest Hahn Corp.
Theater	15,000 S.F.
Total	670,000 S.F.
Open Mall Area	120,000 S.F.
Landscape Area	3.5 Acres (152,460 S.F.)
Parking Ratio (3,441 ÷ 670)	3,441 Cars 5.1
Projected Opening Date	Fall 1978 - Spring 1979

Source: Ernest Hahn Corporation
March 15, 1976

F-25-

1. District No. 1 currently is upgrading its secondary treatment facilities
2. to bring the plant up to capacity with additions to the biofilter, micro-
screen, and chlorine contact chamber. The plant is under a cease and
4. desist order from the Regional Water Quality Board because of its outfall
5. to Corte Madera Creek. The Marin-Sonoma Wastewater Program Analysis
6. indicated that a regional plant and deep water outfall off Point San Quentin
7. would be a cost-effective solution for the Central Marin Planning Region
8. which includes central San Rafael, Point San Quentin, and the communi-
ties of Corte Madera, Larkspur, Ross, San Anselmo, Fairfax, Kentfield,
and Greenbrae. (4) Current efforts are being made under a federal
11. Section 201 planning grant to develop a specific regional wastewater man-
agement plan. Construction of a new regional plant and outfall probably
13. would not be completed until the 1980's.
14. Water Supply
15. Corte Madera lies within the service area of the Marin Municipal Water
16. District (MMWD) which provides water to the eastern portion of the
17. county south of Novato, with a 1974 estimated service area population
18. of 187,000. At present, water consumption averages over 32,000 acre
19. feet per year, 6 percent in excess of the District's net safe yield of
20. 30,000 acre feet. In the spring of 1973 a moratorium was imposed on
21. connections to the system. The unusually dry winter and spring of
22. 1975-76 caused a water shortage, and as supplies dwindled rationing
23. was imposed on March 1, 1976. Water reclamation plans have been
24. accelerated so that reclaimed water from Sanitary District No. 1 and
25. the Las Gallinas Sanitary District can be trucked on an emergency basis
26. to irrigate public landscaped areas during the summer of 1976. Water
27. reclamation on a permanent basis is expected to begin in 1977, adding
28. 2,000 acre feet to MMWD's capacity. MMWD currently is preparing plans
29. to construct the Soulejule Dam which would add 5,000 acre feet if
30. approved by the voters in November 1976.
- 31.
- 32.
- 33.
- 34.
- 35.
- 36.
- 37.
- 38.
- 39.
- 40.
- 41.
- 42.
- 43.
- 44.
- 45.

(4) Nute, Jenks & Adamson; Brown and Caldwell; TYA; Bartle Wells,
Marin-Sonoma Wastewater Program Analysis, 1975.

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II-24

1. sewer cleaning and pump station repair attributable to Marin Mall. No attempt has been made to relate an expected \$6,000 revenue increase
2. for Flood Control Zone No. 9 to the additional flood control measures
3. needed for Marin Mall.

6. Sanitary Sewers

8. About one gallon of liquid waste is expected to be produced each day for each eleven square feet of gross leasable space in the shopping center.
9. This constitutes about 47 percent of Marin County Sanitary District No. 2's
10. 0.129 MGD (million gallons per day) reserve capacity that it can utilize before reaching its contract maximum. Because Marin Mall's sewage production would be only about 1 percent of the sub-regional total, the impact on the treatment plant operation and the quality of the receiving waters would be slight. Corte Madera Creek would have some increase in basic algal nutrients (nitrogen and phosphorus) as well as a minor amount of toxic heavy metals and other undesirable elements generally found in wastewaters which are not removed during conventional sewage treatment.

21. Water Supply

23. The Marin Municipal Water District's moratorium permits new development to use water up to the historical maximum use for the site. Therefore, until the moratorium is lifted the Marin Mall site will be limited to 0.86 acre feet yearly, or the amount now used by the State Highway Patrol office and the one small industrial building. Projected water consumption of Marin Mall will depend on the precise mix of development.
29. While consumption is expected to be in the 60-70 acre feet yearly range based on Northgate Mall usage in 1972, it could vary considerably. For instance, restaurants consume around 0.9 acre feet of water yearly per 1,000 square feet of floor area while specialty retail shops consume only 0.02 acre feet per 1,000 square feet.

35. Storm Drainage

37. The development of streets, sidewalks, parking areas, and buildings for Marin Mall would significantly alter the present hydrological balance of the area, resulting in a gain in runoff quantity and a loss in runoff quality. The net effect of Marin Mall runoff on the Eastside Outfall watershed would be a 10 to 13 percent increase in volume. The quality of the runoff would become that of a typical urban commercial area, largely due to contaminants flushed from paved areas. As the existing open channel drainage system will be buried, normal filtering and biochemical reduction will not occur and somewhat greater amounts of

1. ANY IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED
4. - Alteration of the terrain due to the fill and surcharge.
6. - Destruction of native vegetation and wildlife habitat, including salt marsh and grasslands.
9. - Reduction of wildlife population in filled areas, including meadow mice, waterfowl, hawks, doves, owls, perching birds, blacktailed jackrabbits, ground squirrels, herons, coots, kingfishers, and gopher snakes.
14. - Loss of potential open space.
16. - Use of resources to provide building materials for the development.
18. - Depletion of energy resources.
20. - Use of critical water resources.

1. POSSIBLE MITIGATION MEASURES

2. PUBLIC FACILITIES AND SERVICES

3. Recreation and Parks Impacts

4. Depending on whether the Town chose to reduce the tax rate, expand services, or increase budget reserves due to the gain in its tax base, the Town would have the option of operating new recreation programs and/or acquiring additional park or open space facilities to serve currently unmet needs.

5. Energy Impacts

6. The developer could make several improvements in design and operation of the shopping center to reduce inefficient and unnecessary use of energy.

7. - Reduce the gross leasable sales area.

8. - Increase the rate of ventilation from 10 to 15 air changes per hour, and use temperature-activated louvered hoppers to introduce fresh air.

9. - Increase insulation and light colored surfaces and reduce exterior glass areas to optimize thermal transition of building materials.

10. - Employ building materials which consume a minimum of energy in their manufacture and use.

11. - Incorporate all available mechanical ventilation and lighting systems energy-saving features.

12. - Limit lighting to minimum necessary intensity levels and eliminate non-essential illumination.

13. - Size power connections to meet minimum energy needs.

14. - Write energy use limits into tenant's lease agreements.

15. Water Supply Impacts

16. The developer could install water saving plumbing fixtures and could construct a separate irrigation water treatment and distribution system in order to use reclaimed wastewater.

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IV-1

1. Marin Municipal Water District voters could pass a bond issue to expand water supply resources.

2. TRANSPORTATION

3. Traffic Impacts

4. The following trafficways improvements would be necessary to mitigate the adverse impacts of Marin Mall traffic and would maintain at least a minimum or better acceptable level of service. (See Appendix 6, pages 50-54.):

5. - Widen Tamalpais Drive to six lanes between the U.S. 101 freeway and San Clemente Drive.

6. - Improve the U.S. 101 - Tamalpais Drive interchange by removing ramp loops from the northeast and southwest quadrants, realigning both north and southbound off-ramps to meet signalized intersections with Tamalpais Drive, and widening the overpass approaches.

7. - Install a three phase actuated traffic signal at the San Clemente Drive - Tamalpais Drive intersection.

8. - Widen Redwood Highway to four lanes south of Industrial Way.

9. - Widen the Paradise Drive North approach to Redwood Highway to two lanes.

10. - Widen Nellen Avenue to three lanes (two southbound and one northbound) from Fifer Avenue to the U.S. 101 underpass which should remain two lanes. Between the underpass and Paradise Drive North, Nellen should be three lanes eastbound and one lane westbound.

11. - Install a traffic signal at the Nellen/Paradise/Redwood intersection.

12. - Make short-term improvements to the Nellen/Fifer/U.S. 101 intersection so that only right turns can be made from southbound Nellen Avenue.

13. - Improve the U.S. 101 southbound off-ramp to two lanes as it approaches Nellen Avenue.

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IV-2

TABLE 16:
MARTIN NALL REGIONAL SHOPPING CENTER: SYNTHESIS OF BENEFITS AND DISENBENEFITS
Impacted Jurisdiction, Area, or Group

Impact Type	Town Residents	Lower Ross Valley Residents	South/Central Marin Residents	Freeway Users	Local Street Users	Transit Riders	Pedestrians/Cyclists	Marshes	Wildlife	Vegetation	Water Supply Facilities	Sewage Disposal Plant	Waste Disposal Sites	Archaeological Sites	Town of Corte Madera Finances	School Districts Finances	Sanitary Districts Finances	Martin Municipal Water District Finances	Martin County Finances	Corte Madera Shopping Center	Existing Regional Shopping Facilities	New Regional Shopping Facilities	
Population Growth	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Housing Demand	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Construction Employment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Full Time Employment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cost of Living	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Local Life Style	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Suburban Atmosphere	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Retail Sales	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Local Government Finances	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
School Enrollment	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Police Protection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fire Protection	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Municipal Administration	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Street Maintenance	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sanitary Wastewater	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Solid Waste	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Water Supply	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Water Quality	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Storm Drainage	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Energy Use	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Traffic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Transit Service	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Pedestrian/Bicycle Circulation	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Landfill/Surcharge	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Seismic Hazard	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Air Pollution	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Noise	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Not Subject to This Type of Analysis																							
In Balance											Adverse												
Beneficial											Adverse												
Major - long term											Major - long term												
Major - short term											Major - short term												
Minor - long term											Minor - long term												
Unknown											Unknown												

TABLE 17:
ALTERNATIVE NO. 1, RESIDENTIAL: SYNTHESIS OF BENEFITS AND DISENBENEFITS
Impacted Jurisdiction, Area, or Group

Impacted Jurisdiction, Area, or Group

Impact Type	Town Residents	Lower Ross Valley Residents	South/Central Marin Residents	Freeway Users	Local Street Users	Transit Riders	Pedestrians/Cyclists	Marshes	Wildlife	Vegetation	Water Supply Facilities	Sewage Disposal Plant	Waste Disposal Sites	Archaeological Sites	Town of Corte Madera Finances	School Districts Finances	Sanitary Districts Finances	Martin Municipal Water District Finances	Martin County Finances	Corte Madera Shopping Center	Existing Regional Shopping Facilities	New Regional Shopping Facilities	
Population Growth	△	△	△	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Housing Demand	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Construction Employment	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Full Time Employment	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Cost of Living	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Local Life Style	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Suburban Atmosphere	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Retail Sales	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Local Government Finances	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
School Enrollment	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Police Protection	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Fire Protection	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Municipal Administration	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Street Maintenance	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Sanitary Wastewater	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Solid Waste	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Water Supply	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Water Quality	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Storm Drainage	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Energy Use	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Traffic	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Transit Service	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Pedestrian/Bicycle Circulation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Landfill/Surcharge	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Seismic Hazard	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Air Pollution	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Noise	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	
Visual	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	

Not Subject to This Type of Analysis

Beneficial

△ Major - long term
△ Major - short term

In Balance

*

Unknown

Adverse

△ Major - long term
△ Major - short term
○ Minor - long term

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TOWN OF CORTE MADERA

TOWN HALL

CORTE MADERA, CALIFORNIA 94925



RESPONSES TO COMMENTS BY THE TOWN OF CORTE MADERA

1. The FES has been revised extensively to reflect information from Livingston and Associates' EIR (June 1977) and from various other sources.
2. The text now reflects this information. Current site plans propose use of the right-of-way but the developer is willing to study plans which would not.
3. There have been extensive revisions made to the traffic element of this document. The subject statement has been deleted.
4. Comment noted.
5. The project would require a zoning variance for building height from the Town.

June 27, 1977

Col. H. A. Flertzheim, Jr.
Department of the Army
San Francisco District, Corps of Engineers
211 Main Street
San Francisco, Ca. 94105

Dear Col. Flertzheim:

Re: Proposed Final Environmental Statement
Hahn Shopping Center
May 9, 1977

The Town of Corte Madera has reviewed the Proposed Final EIS for the Hahn Shopping Center and would have the following comments:

1. The material in the EIS appears to be outdated and to rely almost entirely on material that is three and four years old. The sections on economics, population, water supply, geology, and circulation, in particular, are out-of-date and contain numerous errors. As a minimum, the EIS should incorporate the information contained in the Final Environmental Impact Report on the Marin Mall prepared for the Town of Corte Madera this year by the firm of Livingston and Associates.
2. Several statements made about Corte Madera Town policy in the EIS are incorrect. In particular, the following sections should be revised:
 - a. The description of the Redevelopment Plan on page 3 (Paragraph 1.11) should make it clear that the land uses shown in that Plan no longer represent current Town policy. Town policy now calls for no commercial, residential, or industrial use of the area east of the railroad right-of-way and specifically opposes public transit use of the railroad right-of-way.
 - b. Corte Madera has no plans to widen Paradise Drive between Prince Royal Drive and Westward Drive to provide two lanes in each direction, as stated on page 34.

Col. H. A. Flertzheim, Jr.Page Two

c. In terms of location and land use, the proposed shopping center is not entirely consistent with the Town's General Plan, as stated on page 39. The size of the marsh and shopping center areas proposed by the developer do not conform to those listed in the General Plan.

d. The discussion of the Town's Zoning Ordinance on page 39 should point out that the building heights proposed by the developer are in excess of those that will be permitted by the new Zoning Ordinance that is being considered by the Town.

Most of the information needed to correct the EIS is contained in the Final EIR on Marin Mall prepared by Livingston and Associates. The Town would be happy to work with the Corps of Engineers in updating and correcting the EIS.

Sincerely yours,

Joel A. Shawn
Joel A. Shawn
Acting Mayor

JAS:BEK:lm

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TOWN OF CORTE MADERA

TOWN HALL

CORTE MADERA, CALIFORNIA 94925

Colonel H. A. Flertzheim, Jr.
District Engineer
U.S. Army Engineer District
211 Main Street
San Francisco, Ca. 94105

Dear Colonel Flertzheim:

I would like to share with you some of my observations and a question regarding the Proposed Final Environmental Impact Statement for the Hahn Shopping Center (Marin Mall Regional Shopping Center) in Corte Madera, Ca., which was prepared by your office and released in May 1977. My following remarks are made in my capacity as an individual councilman.

I feel that the subject EIS failed to include several important sources of significant information. One omission was the EIS's failure to mention the advisory election result of November 2, 1976, regarding public opinion on the latest proposed shopping center project. The results of this election were

Voters opposed to project: 54.5%,

Voters in favor of project: 41.9%, and

Voters expressing no opinion: 3.6%.

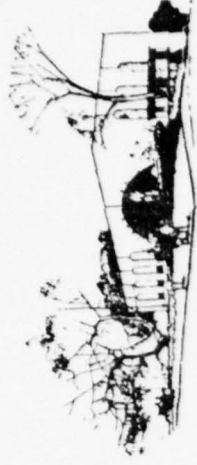
Town files indicate that the Corps was sent a copy of these results on December 2, 1976. In order that you may still consider inclusion of this election result in your EIS, you will find enclosed a copy of Corte Madera Town Resolution No. 1710, which states the ballot proposition, and a summary of the official election returns.

It would seem that the Corps' response to the comment of the Marin Conservation League on page 99 would be subject to serious question in light of the above election result. The Corps' rationale for its response should be elaborated.

The EIS makes no mention of The Lower Ross Valley Transportation Study of August 1975. This study was prepared principally by Marin County staff as a joint project by the Town of Corte Madera, the City of Larkspur, and the County of Marin. This study was undertaken to evaluate the traffic effects of several major projects in the Lower Ross Valley, including those of the currently proposed Hahn Shopping Center. The Study's summary of major findings includes the statement, "The Lower Ross Valley Study has found that the combination

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DOCUMENT F-7



June 10, 1977

RESPONSES TO COMMENTS BY THE TOWN OF CORTE MADERA
(Councilman Weingarth)

1. Paragraph 1.17 now includes this information.
2. The Marin Conservation League's comment is that the proposed development is massive, out-of-scale to the small town character of Corte Madera. This FES ~~does~~ does not directly address questions of scale. ~~SNV~~ SNV to evaluate the compatibility of the project to its surroundings in terms of meaningful gauges such as traffic congestion, economics, etc.
3. Important conclusions from the Lower Ross Valley Transportation Study are now summarized in 4.71.
4. The traffic element has been extensively revised.
5. The FES has undergone extensive revision to include information from the Livingston and Associates' EIR and from other sources.
6. This question was answered in a letter from the San Francisco District to Councilman Weingarth dated 23 June 1977 (Appendix A, Document A-31).

of major developments now proposed for the Corte Madera-Larkspur area would produce travel demands far exceeding the capacity of local streets and/or transit systems. I believe the Corps EIS could benefit from the explicit consideration of this study. A copy of it may be obtained by writing to

Mr. Robert L. Harrison
Chief, Transportation Planning
County of Marin
San Rafael, Ca. 94903.

While on the subject of traffic impact, the Corps EIS appears to be seriously out of date, lacking in any detail, and directed to an earlier project. For examples, page 33, sec. 2.105 states, "The State Department of Transportation is presently widening U.S. 101 through Corte Madera by the addition of one lane in each direction within the existing center divider." This widening was in fact accomplished two or three years ago. Sec. 4.83 of page 59 refers to the traffic volumes depicted in Plate 13. Plate 13 was prepared in 1971 by Donald Frischer and Associates. The same vintage can be said of Tables 21 and 22. Traffic mitigation measures are not well-defined, and no schematics are present showing proposed circulation patterns for the new project which was presented in 1975.

The Town of Corte Madera has commissioned the planning firm of Livingston and Associates to produce a draft environmental impact report at a cost far in excess of \$100,000. (It is my impression that the Corps EIS draws very little from this report when compared to the reliance given to the representations of Sedway, Cook, Inc. and Urban Projects, Inc.) The City of Larkspur has reviewed this Livingston EIR, and it has forwarded its reaction to this report to the Town. I am enclosing a copy of Mayor Curley's letter of October 7, 1976, for your examination and use as you see fit.

Page 2 of your proposed EIS states, "Department of the Army permits will not be issued where authorization of the proposed work is required by State and/or local law and that authorization has been denied---." I would appreciate a clarification on this point. In light of Corte Madera's suspension of its fill permit for the project, will the Corps, if it rules favorably on the project, grant a fill permit in lieu of the permit required by the Town? The text of page 2 seems to be unclear on this point.

I appreciate your attention in this matter, and I hope that you find this letter to be constructive as you make final improvements to your environmental impact statement.

Cordially Yours
Larry P. Weingarth
 Larry P. Weingarth
 Councilman

Enclosures: Town Resolution No. 1710
 Election return summary of 12/2/76
 Mayor Curley's letter of 10/7/76

cc: Town Council
 Representative John L. Burton
 Council on Environmental Quality



1000 FIFTH AVE. SAN RAFAEL, CALIF. 94902 / (415) 465-1112
 MAYOR: C. P. BURTON
 CITY MANAGER: JOHN L. BURTON
 ASST. CITY MANAGER: JACK E. HADON
 WILLIAM J. KELSER

October 4, 1977

Lt. Colonel Karl Schmid
 Deputy District Engineer
 U.S. Army Corps of Engineers
 211 Main Street
 San Francisco, CA 94105

Deat Lt. Colonel Schmid:

The City of San Rafael appreciates this opportunity to make the following response to the U.S. Army Corps of Engineers proposed final Environmental Statement on the Hahn Shopping Center (Marin Mall Regional Shopping Center in Corte Madera), in accordance with the Corps' policy. Please note that this FES was first received by the City September 8, 1977, not in May, 1977.

There appear to be statements in the FES which could create a misleading representation of the Hahn Center's impact on San Rafael and other major retail shopping areas in the County. Specific areas of concern are the projected demand for additional department store space in the County and the future and vitality of San Rafael's downtown.

Page 13, Section 2.09 of the FES estimates that County residents buy \$45,000,000 of Department Store Type Merchandise (DSTM) out of Marin County. This "leakage" is estimated at 30% of potential County sales. From this estimate of leakage, plus estimates of additional retail demand from future population increases, the Corps calculated the potential for new department store space. However, these estimates were calculated from outdated population projections and did not consider retail development since 1972. (Page 14, Section 2.12 and Tables 5 and 11)

Population figures were based on the outdated population projections from the Countywide Plan. Actual increases have fallen far short of these projections. For example, Table 5 projects a population of 230,000 in 1975; actual 1976 population was 220,920. Retail development over the past five years was not taken into account in estimating 1975 retail sales. Specifically, the FES did not take into account the Sears store in Northgate, Macy's new home store, the expanded Emporium, the Cost Plus development in Larkspur, new neighborhood centers and the upgraded retail use

1. Source: County of Marin Planning Department

RESPONSES TO COMMENTS BY THE CITY OF SAN RAFAEL

1. The economic analysis in this document has undergone substantial revision. The Marin Mall project would take some businesses from other areas; the projected growth in market demand will partially compensate for this.
2. The economic data presented in the Proposed FIS was prepared for an earlier, larger, Bahn proposal. The current analysis reflects the scale-down proposal. More recent population estimates and recent developments are considered in this FIS.
3. Population projections provided in the text have been updated and are those of the California State Department of Finance.
4. The revised economics sections gives less emphasis to the notion of "capturing" market "leakage" to retailers outside Marin County.
5. The current economic analysis indicates that some existing retail centers could suffer long-term adverse impacts.
6. Comment noted.
7. Comment noted.
8. Section 4.04 now includes this information.

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Lt. Colonel Karl Schmid
October 4, 1977
Page Two

of existing buildings (i.e. downtown San Anselmo, conversion of mattress store to home store, warehouse conversions to retail space, etc.)

Potential DSTM sales can be estimated, using the Corps methodology by multiplying the 1976 Marin County population of 210,820 by the Corps estimated \$720 per capita expenditure on DSTM, for an estimated potential of \$159,083,400. Actual 1976 DSTM sales were approximately \$186,000,000, considerably more. This would throw serious doubt on the hypothetical high leakage of sales out of the County, and hence the incremental demand for a new regional shopping center, without a serious impact on existing retail areas.

Page 40, Section 4.03 states that due to residual DSTM sales of almost \$45,000,000 "... the impact of a new regional center would not result in a level of competition higher than acceptable under normal competitive standards ..." in existing retail areas. The validity of this projection is questionable, even assuming the \$45,000,000 residual is accurate. Department and specialty stores require a minimum of 300 per square foot in sales. Assuming the Corps leakage calculation is accurate, the County could only support an additional 500,000 (\$45,000,000/\$90) square feet of retail space selling DSTM without causing competitive harm to existing retail space. This is less than Hahn's proposed 670,000 square foot center. In fact, in another section, the FIS concedes, (Page 41, Section 4.04) that existing retail facilities may experience a 10 to 15% short-term decline. Taking into account the smaller than anticipated population figures and the last five years retail development, that decline for existing retail areas would most likely be of considerably more than "short term" duration.

Page 15, Section 2.17 describes San Rafael as the "... commercial and business center of not only San Rafael, but of Marin County as well." The FIS, based on outdated business indicators, foresees a continued decline for the San Rafael Central Business District. In fact, there are strong indications that the decline in San Rafael turned around several years ago. Downtown sales and rents have increased significantly. Vacancies are almost non-existent, and assessed valuations have increased substantially.

Section 4.12, Page 42, describes the downtown San Rafael market as "limited". Actually, San Rafael, including the downtown and Northgate, account for 42% of all taxable sales in the Marin market. The FIS suggests that San Rafael's future potential is for office and apartment development. In fact, while retail sales have been strong, the demand for office and apartment space has lagged.

2. Source: State Board of Equalization
3. Independent Journal, August 2, 1977

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Lt. Colonel Karl Schmid
October 4, 1977
Page Three

The report refers briefly to the Central San Rafael Redevelopment project. This Redevelopment program is making considerable progress in the following areas to revitalize the downtown:

1. Development of new public parking lots
2. Improved traffic circulation
3. Downtown beautification

Furthermore, the Agency is pursuing its policy of attracting a free-standing department store. With the help of a Redevelopment program, the downtown will continue as a viable retail center. From both the City and County standpoints, it would be unfortunate to dilute the potential of a thriving central business district with a regional shopping center. The result would be urban deterioration combined with the loss of a valuable open-space and marshland.

Thank you again for this opportunity to review the FES. Please call if you need additional information or have any questions.

Sincerely,

Lynn M. Sedway
Lynn M. Sedway
Redevelopment Assistant

LMS:lds
cc: Jim Pitts, U.S. Army Corps of Engineers
Herbert Hotchner, Planning Director

F-43



by Ansel Adams in The Life of Ansel Adams

SIERRA CLUB

Mills Tower, San Francisco 94164
Marin Regional Group, Box 896, San Rafael, Cal.
94902

June 27, 1977

Gentlemen:

In reference to the application by Ernest W. Hahn, Inc. for a Permit to fill 45 acres of grasslands and marsh area in Corte Madera, the Marin Regional Group of the Sierra Club would like to compliment the Army Corp of Engineers on providing a fairly complete and accurate Environmental Statement on this complicated project. An analysis of the environmental impacts shows the following:

- 1.) Traffic Patterns - The impact on the traffic circulation on Highway 101, the major transportation corridor in Marin County, will be severe, negative, and remain unmitigated.
- 2.) Seismic Hazards - The design of the shopping center structures, specifically the tiled roofs, reference page 33, 4.59, coupled with the substantial thickness of unconsolidated and partially consolidated bay mud underlying the site, create a potentially severe seismic hazard.
- 3.) Water Runoff - The runoff from the parking lot and the structures, when channeled into the marsh at the north of the property will severely impact this fine wildlife habitat. Also the loss of temporary storage for storm runoff due to the proposed fill will potentially impact the surrounding areas with flooding.
- 4.) Vegetation and wildlife - To quote page 17, 2.75, "perhaps such an eco-fauna relationships of mammals, birds, and invertebrates may be observed elsewhere in some remote area of the Bay region, but to observe these communities so close to suburban development is highly unusual." And page 32, 4.57, "The shifting of existing habitats on the project site, coupled with the noise during construction and to a certain extent after completion, may result in an indirect adverse effect on the adjoining areas and their inhabitants." We can ill afford to see any of this valuable marsh and grassland habitat disappear under a shopping center.
- 5.) Air Pollution - To quote page 27, 2.79, "In addition, the basin, with its high frequency of low wind speeds, the sheltering effect of the surrounding terrain, the reversal of wind direction with daytime up-valley and nighttime down-valley flow, and the frequency of sunny days, has the potential for the frequent accumulation of pollutants in high concentrations." We would like to see nothing accepted which will provide for further air pollution in southern Marin.

DOCUMENT F-9

On the basis of these and other problems, we must oppose the granting of this permit for the proposed Hahn Shopping Center land fill.
Sincerely, *Mary Jo Schoenbrun*
Mary Jo Schoenbrun
Conservation Chairman

F-44

RESPONSES TO COMMENTS BY THE SIERRA CLUB, MARIN REGIONAL GROUP

1. The proposed project would have a measurable impact on the U.S. 101 freeway. Improvements to the road network, including the impacted freeway interchanges, have been discussed by the applicant with the California State Department of Transportation and the Town of Corte Madera. None of the responsible agencies has made firm plans to carry out the work necessary to minimize the traffic impact.
2. The Mall will be required to meet the Town's building code (See a letter from Burke, Nicolais, Archuleta, Document A-27 attachment) under an agreement with the U.S. Fish & Wildlife Service.
3. The Marin Mall will be required to insure water quality is maintained for water entering the wildlife reserve to the north. The area of the wildlife reserve is now serving as a sedimentation basin and storm water catch basin. This use is already aging this ponding and will eventually end its life.
4. Comment noted.
5. Comment noted.

F-45



Marin Audubon Society Box 441 Tiburon, California 94920

June 27, 1977

Col. H. A. Flertzhelm, Jr.
District Engineer
Department of the Army
S. F. Dist. Corps of Engineers
100 McAllister Street
San Francisco, CA 94102

Re: Public Hearing
U. S. Army Corps of Engineers Public Notice No. 11101-47
November 9, 1976 Application of Ernest W. Hahn, Inc.
(Marin Mall) Corte Madera

Dear Colonel Flertzhelm:

The Conservation Committee of the Marin Audubon Society has reviewed the Proposed Final Environmental Statement on the Shopping Center, Corte Madera, dated May, 1977, and we wish to point out several deficiencies of the statement and particular concerns of Marin Audubon affecting the wildlife habitat in the area.

We are quite surprised to find that the latest correspondence contained in the final statement is dated July 21, 1975, which is now two years old. We feel that in the last two years there have been significant changes in policy and planning of many federal, state, and local agencies which may have a substantial impact on the project and which should be addressed in the final statement.

As an example, the letter dated December 9, 1976 from this Society in response to the Public Notice has not been included. Also, the following is a partial list of significant federal and state policies which should be considered in making your decision:

1. The policy of the U.S. Department of Interior Fish and Wildlife Service for the mitigation and compensation required to offset natural

F-46 DOCUMENT F-10

A Branch of National Audubon Society

RESPONSES TO COMMENTS BY MARIN AUDUBON SOCIETY

1. Exhibits of correspondence have been expanded and updated to reflect current policies.
2. U.S. Fish and Wildlife Service comments on the subject activity are included as Document A-29, Appendix A. Their analyses and recommendations play an important role in the Corps permit review process.
3. The northern sloughs now serve as sedimentation basin and storm water catch basin. This area plays a role in local ecology by filtering out sediments and pollutants from water before water runs into the Bay. The process is already aging the northern marsh. No doubt the same water treatment could be achieved artificially, but at much greater cost. The developer has agreed to the requirement of the U.S. Fish & Wildlife Service that water flowing into the wildlife preserve would not exceed current levels of pollution. In this way, the reserve would continue to serve as sedimentation basin, pollution sink, and storm water catch basin.
4. Comment noted.
5. The California Department of Fish & Game has participated in the review of this permit application (Document A-29, Appendix A).

F-47



Marin Audubon Society Box 44 Tiburon, California 94920

resource values damaged or lost by filling projects as contained in a letter to the City of San Rafael Redevelopment Agency, March 31, 1977.

Applicable to the proposed Hahn project is Table I, entitled, "Ranking of Habitat on Former and Present Tidelands for use in Mitigation and Compensation Proceedings in the San Francisco Bay Complex." Under this policy, unit values are calculated on the basis of a habitat ranking from 1 to 10 for lands being lost and that the values are required to be compensated for by the applicant or construction agency in acceptable projects.

We urge you to adopt the above-outlined Fish and Wildlife Service policy and apply the proposed mitigation measures to the Hahn project.

2. In applying mitigation measures for loss of wildlife habitat, consideration should be given to the use of treated wastewater for restoration and enhancement of the marsh areas to be preserved. For this purpose the Environmental Impact Statement should contain reference to the "Policy and Guidelines on the Use of Wastewater to Create, Restore, Maintain, and/or Enhance Marshlands" adopted by the S.F. Bay Regional Water Quality Control Board, February 15, 1977. Inherent in the policies is the recognition of the beneficial aspects of marshlands. The feasibility of initiating and funding a reclamation project using wastewater from the Sanitary District No. 1 treatment plant should be investigated as a mitigation measure.

3. To bring the Environmental Impact Statement up to date, reference should also be made to the "Policy and Action Plan for Water Reclamation in California" adopted by the California State Water Resources Control Board, January 6, 1977. This document proposes that the State and Regional Boards encourage and consider or recommend for funding water reclamation projects in which "reclaimed wastewater will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation and aesthetics associated with any surface water or wetlands."

4. In addition, the "Wastewater Reclamation Policy" of the California Department of Fish and Game adopted August 10, 1976 is significant in relation to preservation and restoration of marsh areas.

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A Branch of National Audubon Society



Marin Audubon Society Box 441 Tiburon, California 94920

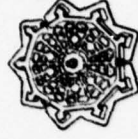
Marin Audubon is opposed to the issuance of a permit for filling of any of the remaining marshland on this property. If permitted, it will mean further destruction of irreplaceable wildlife habitat already seriously decimated by recent filling of the adjacent Muzzi Marsh by the Golden Gate Bridge Highway and Transportation District.

We shall appreciate your further consideration of these matters.

Sincerely,

Gary L. Hallway
Gary L. Hallway
Conservation Committee
Marin Audubon Society
297-3249

J. Warren Nute
J. Warren Nute, Chairman
Conservation Committee
Marin Audubon Society
453-9119



LIVINGSTON AND ASSOCIATES
CITY AND REGIONAL PLANNERS

40 GOLD STREET, SAN FRANCISCO, CA 94133 • (415) 986-4579

June 27, 1977

Mr. H. A. Flertzhelm, Jr.
U. S. Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Mr. Flertzhelm:

We have reviewed the Proposed Final E.I.R. on the Regulatory Permit Application by Mr. Hahn to fill land for the Marin Mall Regional Shopping Center in Corte Madera, California dated May 9, 1977.

We do not object to the conclusions which are drawn in this report. However, we believe that the material which has been used directly from our August 1976 Draft E.I.R. Marin Mall Regional Shopping Center for the Town of Corte Madera should be presented correctly in the following instances:

Page 59, last sentence of Para. 4.84: Work done by DeLeuw, Cather and Co. supercedes the traffic analysis work done by Frischer in 1971 and the work done by Robert Conradt in 1973 (for Sedway and Cooke). Much of the material presented on pages 60-62 is a summary of DeLeuw's work regarding the currently sized project.

Page 65, Para. 6.07: These types of alternatives were set by the Town of Corte Madera and developed by Livingston and Associates. We do not know that the developer has considered them in lieu of the shopping center. Note that your reproduction of our Draft E.I.R. pages V-3 through V-21 is Appendix E rather than D.

We have previously transmitted to your office our (final) E.I.R. on the Marin Mall Shopping Center dated June 1977.

Sincerely,

Roy L. Goff
Roy L. Goff

RC/ms

P-50

DOCUMENT P-11

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T-49

A Branch of National Audubon Society

RESPONSES TO COMMENTS BY LIVINGSTON AND ASSOCIATES

1. The traffic analysis in this document has been substantially revised and is based on information from the Livingston and Associates EIR (June 1977).
2. Comment noted.

14 Council Crest
Corte Madera
Calif. 94925

Colonel H.A. Flertzheim, Jr.
District Engineer
U.S. Army Engineer District
211 Main Street
San Francisco, Ca. 94105

RE, REVIEW OF EIS

Dear Colonel Flertzheim:

Page 9, paragraph 1.36, Quotes: "The architectural design of the project would incorporate structural features that would permit differential settlement along the exterior of the building. The exact mechanics have yet to be defined." "..... flexible connections between steel beams, girders and columns." Is such a construction feature part of the town of Corte Madera building codes? Quote: "This design would also minimize the potential collapse should liquefaction occur on the site (Englekirk 1974)." More information is required about the statements in this reference in order to examine the merits of the proposal. In other words one would like to check if Englekirk is theorizing or has a record of several installations that have been thoroughly tested.

Paragraph 1.41. "The shopping center is subject to flooding from high tides or storm run off from the area west of U.S. 101....." Is there a statement in the EIS stating that the recalled Council granted a 5-foot fill variance to Hahn? That is 5 feet less height is required.

Paragraph 2.14, line 4, Quote: "The existing shopping center provides approximately 25 percent of the total revenues to the Town I would present in the EIS that there is agitation by some of the law makers in Sacramento to pass legislation that will require sharing this revenue and if the Hahn shopping center should become a reality this revenue also would be shared with other cities. The sharing of the education funds has established a precedent. Carl Erwin in the article, A HARD LOOK - PUBLIC SERVICES, THE RICH DO BEST, in the S.F. Sunday Examiner & Chronicle, June 12, page 1 and 14, states, "Legislation will be proposed in Sacramento tomorrow to amend these contrasts. Prepared with the aid of Gov. Brown's staff, the bill proposes sharing some property and sales tax revenues generated in the Bay Area."

Paragraph 1.28, states "Starting elevation is expected to be 7.6 feet above mean lower low water and after 50 years 4.8 feet." At Corte Madera water front the mean high water is 5.7 feet. Accordingly the floor elevation in 50 years will be 0.9 of a foot below MHHW. Is this serious? Paragraph 2.45 it is stated that the height of the bay water during flooding and high winds reach 8.5 to 9 feet above mean low water. This height of 9 feet is greater than 7.6 feet. Shouldn't the EIR state that a large emergency pump will be installed?

RESPONSES TO COMMENTS BY ALICE AND RALPH HIGGINS

1. Further settlement will take place after the construction of buildings on the site (Paragraph 4.20). Although architectural designs have not yet been made, the developer has acknowledged the importance of building designs which allow for this further settlement without major cosmetic damage or building failure. The Englewick study of 1974 considered an earlier proposal for a much larger mall. But it notes that such designs can also serve the purpose of insuring maximum building stability during possible ground failure.
2. Please refer to paragraph 4.32.
3. The FES describes current state practice. If state law should change, to allow for revenue sharing, tax revenues from Marin Mall might indeed be shared with other jurisdictions.
4. Two questions are suggested here: Is it serious to have grounds and buildings sinking 2.8 feet in 50 years and, further, is it serious to have buildings placed below tidal levels.
5. This FES notes this amount of sinkage without comment. The site is now protected from tidal flows by dikes and levees.
6. Comment noted.
7. The acceptance of the land fill technology brings with it some risks. But use of filled lands is by no means novel or reserved for low-density areas. The financial district of San Francisco is for low-density areas. The financial district of San Francisco is for low-density areas.
8. The traffic element of this FES has been revised.
9. See Plate 3.
10. The developer plans to use at least a portion of the right-of-way.
11. Plate 13 is not referenced in the revised traffic sections and has been removed.
12. The results of the November 1976 election are now presented in paragraph 1.17.

P-53

In paragraph 4.37 there is the statement, "The clay soils, which constitute the vast majority of the soils beneath the site, possess a very high resistance to liquefaction" One of the explanations for the extreme devastation that occurred in the better home area during the quake in Anchorage, Alaska, was the land mass slid on a wet clay seam.

In the "Seismic Hazards" section liquefaction is explained. Later on much presentation is given stating reasons why the composition with the depth of the land should minimize earth quake damage. Practically and conservatively the land presents a hazard that should not be minimized by theories or explanations. Seems to me the theater and the two-story buildings, places where large crowds will be, should be placed on piles or on a thick slab of reinforced concrete to decrease the earthquake hazard. Ultra conservatively speaking I think the land to be filled is a hell of a poor site for large crowds to be in buildings, especially with so many clans action suits, unless the developer wants to spend large sums for a secure foundation.

Paragraph 4.67 (a), "San Clemente Drive would be extended through the project area over part of the railroad right away". The railroad right of way is in limbo. Until the right away is finalized no plans should be expressed or else uncertainties should be mentioned.

Paragraph 4.91 has to do with freeway changes. Councilman Velasquez has written regarding the outdated traffic studies described in the FES. Even with the updated reality (8 lanes on highway 101), the traffic is bumper to bumper during the evening rush hour. More traffic for the proposed shopping center would worsen the traffic delay. Seems to me this should be mentioned in the FES.

A plate or figure of the area to be filled should be included in the FES.

On plate 3, the 150-foot railroad right of way is shown being filled and used. This should be changed because the use of the right of way is in limbo.

Plate 13. The Tamalaia over pass is not the same as proposed in the Livingston and Associates EIR. This plate should be changed to be at least similar to that in Livingston Associates EIR.

Page 63 should have a paragraph describing the impact on the Citizens. Quite some time ago Col. Flertheim explained one evening at the Supervisors Chambers the role of the Corps regarding Section 404 regulations. After the meeting we talked about the proposed Hahn Shopping Center. At that time Col. Flertheim emphasized the importance of the results of the town's rather informal opinion survey. The Col. stated this survey showed the town wanted the Hahn Shopping Center. Since then the formal election has taken place. The results of this election show the majority of the town citizens do not want the shopping center. Accordingly the Corps should deny the fill permit.

Sincerely yours, P-54

Alice V. Higgins
Ralph V. Higgins

JOANN GORDON
39 Edison Avenue
Corte Madera, Ca 94925

COMMENTS ON ARMY CORPS EIS (5/77) HARN SHOPPING CENTER

In April, 1977, our newly appointed Secretary of the Interior, Cecil Andrus, said, "We intend to exercise our stewardship of public lands and natural resources in a manner that will make the 3-R's: rape, ruin and run a thing of the past. Our President has a deep personal commitment to end waste and misuse of America's natural resources."

Just about the time of this heartening avowal by Secretary Andrus, I paid one of my periodic calls to the San Francisco Office of the Army Corps of Engineers, and in a conversation with a member of the Regulatory Functions Office, I spoke of my hope that we would be hearing a different tune from the new administration with respect to our marshlands. I was told that Mr. Carter had a lot to learn. I was also advised that while my efforts to save the Corte Madera Marsh were laudable, I should direct my efforts to the Town Council since the Army Corps would probably grant a fill permit to the developer.

The May, 1977 Army Corps EIS is, at best, a puzzle of misinformation. For example: I learn that the Disco stores are still operating in Larkspur and San Rafael. These establishments folded several years ago. I was astonished to read that the Department of Transportation was presently widening Highway 101 by the addition of one lane. This was, of course, done about 3 years ago.

We are assured that pollution will lessen because of more stringent auto emission standards. In reality, Chief of the Environmental Protection Agency, Postel, stated on May 16, that the auto industry has no incentive to undertake any substantial pollution control research over the next few years. On the radio program "Face the Nation" 5/30/77

F-55 DOCUMENT F-13

RESPONSES TO COMMENTS BY JOANN GORDON

1. The District Engineer will on permit applications make final decisions after the staff has assembled and reviewed all available information. The decision is made only after this information is available, and any prior comment suggesting probable rulings would be inappropriate and conjectural.
2. This outdated information has been deleted. The text has received extensive revision.

F-56

Mr. Postal said that there was no more room left over in our cities and towns for any more air pollution.

During the week of November 5, 1976, Marin was the worst polluted of all the counties in the Bay Area, according to a report in the San Francisco Chronicle. Although I live over a mile away from Highway 101, my home was filled with the odor of smog. Since my lungs have been damaged by years of inhaling Los Angeles smog, this is of great concern to me.

We have heard ad infinitum about the revenues which will accrue to the Town of Corte Madera with the building of Hahn's shopping center. But no consideration is given to the inflationary factors which continue to mercilessly shrink our pay checks. An article in the New York Times dated March 21, 1977, charges that government statistics are grossly misleading, and that the Consumer's Price Index used to measure the inflationary bite is outdated, inexact and untrustworthy. Elliot Janeway, a leading economist, said in an article on June 5, 1977, in the San Francisco Chronicle, how great it would be if only life were as good as statistics... it is only the people who are not doing as well as the states...

There is a growing concern in the economic community, as voiced in the Wall Street Journal, Women's Wear Daily and various other publications dealing with shopping centers that regional malls are facing problems. The Journal of Property Management, in an article titled "Golden Age of Shopping Centers" says: "The super regional center provides major planning problems for some cities. Access is critical, and existing streets are inadequate to handle the thousand of cars that jam an ever-widening sea of asphalt creating heavy loads on drainage and sewer facilities from oil deposits, trash, and run-offs. Air pollution from traffic

jam and slow-moving automobiles in large parking areas makes adjacent residential areas less desirable and, in some instances, has been a factor in influencing better housing growth to move still further into suburbia. The cycle then begins again with the undesirable side effects for fire, police, sewage, etc., causing the property tax rate to increase even further. Fortunately, both lenders and major developers across the country have recognized that the point of saturation for regional and super-regional centers is at hand....."

The premise of fat revenues according to the Town of Corte Madera should be viewed with intelligent skepticism for these and yet another important reason: the spectacle of revenue sharing. This is no longer just a notion; it is a serious proposition. A bill proposed by Assemblyman Gualco, relating to regional tax base growth sharing, will appear before the 1977-78 California State Legislature. This is a timely idea, and it may very well come to pass. It will halt or inhibit the frantic race by municipalities to sky-rocket their tax base at the expense of their environment. I have spoken with Assemblyman Gualco about his bill, and he is seriously dedicated to its acceptance whether in 1978 or in the future. Thus, fellow citizens, consider this: Mr. Hahn's venture on our marsh might very well cause you to share those dollars with your neighboring cities and towns.

Recently, a concrete monstrosity called the "Hilltop Mall" was completed on about 80 acres in Contra Costa County. They are coining people in Marin to come and spend some of their money there, by means of newspaper ads which have appeared in the local press, and radio spots on Station KGB. They tell us that this shopping center is "just great" and only 15 minutes from Marin. More food for thought.

William G. Gordon

160 Summit Drive
Corte Madera, Ca.
June 14, 1975

Colonel H. A. Flertzhelm, Dist. Eng.
Army Corps of Engineers
211 Main St.
San Francisco, Ca

Dear Sir:

In regard to the EIS re Hahn Center in Corte Madera (proposed): I have read this and am replying to the notice of public hearing on June 27th.

In Nov. '78, I went to the polls and voted against this unwanted project. In that advisory election about 55% of the residents of Corte Madera also voted against it. But your EIS made no mention of this important fact. Also, traffic studies done by Corte Madera, Larkspur and the County prove that our streets and highways cannot stand any more cars. This is a very serious matter, but your report does not appear to treat it very seriously. Neither do you consider the damage to our air, which is more and more polluted every year. Slow moving, congested traffic in and around such a huge center (estimated 30,000 cars every day) will make the situation worse.

Shirley West
Shirley West

RESPONSES TO COMMENTS BY SHIRLEY WEST

1. The election results are now presented in paragraph 1.17.
2. The traffic analysis presented in this FES indicates where traffic problems are expected to occur. Marin Mall traffic, traffic from other developments, along with existing loads will result in heavy congestion at a number of locations.
3. Air quality impacts are presented in Section 4.48 and Appendix B. The project will add air pollutant emissions to the immediate air basin.

RESPONSES TO COMMENTS BY KATHRYN KLIENE

134 Granada Dr.
Corte Madera, Calif 94928
June 18, 1977

1. The November 1976 election results are now presented in paragraph 1.17.

2. The Lower Ross Valley Transportation Study is now discussed in paragraph 4.71. The proposed project would add to existing traffic problems. Air quality impacts are presented in paragraph 4.48.

Col. R. A. Fierstaheln
Army Corps of Engineers
211 Main St.
San Francisco, Ca 94105

Re: Filing by E. W. Mahr in Corte Madera, Ca.

Dear Sir:

In regard to your EIS of May 77 and announcement of the public hearing which is to be held on June 27, 1977, I wish to make the following comments:

I find your most recent EIS just another justification of the plans of the Mahr Corporation in that it does not even mention the continuing strong opposition of the residents of Corte Madera. There was an advisory referendum on the Nov. 1976 ballot, and 55% of the voters expressed themselves as opposed to this center. This should have been taken into account by the Army Corps when they compiled the EIS.

At least two traffic studies were done, one by the joint effort of Larkspur, Corte Madera and the County. These show that we are already jammed and our roads and highway I-1 cannot stand any such a traffic load as the shopping center will bring. You do not seem to think that our already terribly polluted air will be made even worse when 50,000 more cars start to come into and out of this proposed mall.

Marin County is largely composed of environmentally aware people who ordinarily run elastic type shopping centers. We place more than ordinary values on bayfront and marsh lands such as the one in Corte Madera which has been used for biological studies by the schools for many years. I was of the belief that the Army Corps of Engineers was charged with the duty of PROTECTING not DESTROYING marshes. The latter will certainly occur if you give this developer permission to fill.

Respectfully yours,

Kathryn Kliene
Kathryn Kliene

cc: Cecil Andrus, Secty
Dept of Interior

121 Greenbree Boardwalk
Greenbrae, Calif 94904
June 21, 1977

Col. H. A. Flertzheim
U. S. Army Corps of Engineers
211 Main Street
San Francisco

Dear Col. Flertzheim:

1 In regard to the proposed Hahn Marin Mall in Corte Madera,
the EIS does not substantiate any compelling need for
additional retail facilities on that site.

2 The EIS does substantiate the overwhelming adverse effects,
both irreversible and those which cannot be mitigated, if
the proposed shopping center were built there.

Sincerely,

Edith Witt

Edith Witt

RESPONSES TO COMMENTS BY EDITH WITT

1. This FES reviews marketing analyses prepared by independent
economic consultants and reaches the conclusion that the market
would support the proposed shopping center.

2. Comment noted.

205-20th Street
Manhattan Beach, Ca 90256
June 18, 1977

Col. H. A. Flertshelm
District Engineer
Department of the Army
211 Main Street
San Francisco, Calif 94105

Re: Environmental Statement re Regional Shopping Mall - Corte Madera

Dear Col. Flertshelm:

We have studied a copy of the above statement and respond to the notice of public hearing on the matter which is to be conducted on June 27, 1977.

We are frequent visitors to Corte Madera and are fully aware of the situation there as regards this controversial development. We were surprised on reading your report that no mention was made of last November's election when the majority of Corte Madera voters expressed their disapproval of the mall. We were of the impression that the Army Corps of Engineers does not grant fill permits for huge developments where the public expresses its opposition to such projects.

We believe you have an obligation to allow absolutely no destruction of marshlands which you are entrusted to protect. But on our most recent visit to Corte Madera, we were distressed to see the damage done by the Bridge District when they filled a great portion of the marsh in order to construct the ferry terminal. Why were they permitted to fill so high and why did you not police their work?

It appears to us that your report does not address the traffic problem properly. The streets and highways are already over-burdened. We are given to understand that the proposed mall would add over 30,000 cars daily which would surely spill out over presently crowded streets through the town of Corte Madera and adjoining Larkspur. We could find no solution to this problem in any statements provided in your report.

Yours very truly,

Douglas and Helen Coe

Douglas and Helen Coe

RESPONSES TO COMMENTS BY DOUGLAS AND HELEN COE

1. The text now includes a description of this advisory election, see paragraph 1.17. The primary basis for Corps permit issuance is the overall public interest.
2. This report deals with the Malm fill permit application; we recommend that you contact the Regulatory Functions Branch of the San Francisco District (356-5966) with questions regarding other permit activities.
3. The traffic analysis has undergone extensive revision. The proposed project would add congestion to roadways which would already have congestion problems. Various roadway improvements have been recommended, but firm commitments to make the necessary improvements do not exist at this time.

147 Sycamore
Mill Valley California
June 23, 1977

RESPONSES TO COMMENTS BY FRANCIS AND KATY STRAUSS

Col. R. A. Flertzhelm, Dist. Engr.

Corps of Engineers
211 Main St.
San Francisco, California

Ref: Environmental Statement concerning Proposed Hahn Shopping Ctr

Dear Col. Flertzhelm:

I have read your report and wish to state that neither this shopping center or any of the proposed six alternative projects is a wise use of this land. Not even No. 6 - "develop open space" is acceptable, for that always implies too much human intervention.

The only intelligent use of the area is one which will benefit all people including Mr. Hahn. Obviously, he cannot be brought to the realization that all of this land should be returned to a marsh. It is sad that he and others are so unaware that the survival of the human race depends upon nature everywhere, and marshlands are one of the most vital parts of that nature.

Regarding economic impacts, employment and retail commerce: even tho' the proposed shopping center might cause an increase in jobs in Marin and an increase in department store type merchandise sales, such a development would eventually lead to an aging off of the limb on which we perch. We in Marin would be wise to learn from E. F. Schumacher, the author of "Small is Beautiful" and who spoke recently at the Civic Center. Here is one man who has made a serious study of where mankind has been and where he is going. Schumacher said that today's technology has made things too big, too complex, too costly and too violent.

2 BCDG in a recent report stated that the bay and surrounding wetlands should no longer be treated as ordinary real estate available to be filled. Rather the Bay should be regarded as the most valuable natural asset of the entire Bay region... The San Francisco Bay maintains the fish economy... moderates the climate, combats air pollution, nourishes fish and waterfowl, and in countless other ways helps to enrich our life.

We remind the Army Corps of Engineers to do their duty and protect the Corte Madera marsh from further destruction.

Respectfully,

Francis & Katy Strauss

Francis and Katy Strauss

cc: Hon. Cecil Andrus
Secretary of the Interior

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1. In addition to the original six alternative proposals for this site, an additional proposal has been included which would leave the site undeveloped open space.

2. The Corps agrees that the wetland resources of the San Francisco Bay call for careful and sensitive management.

RESPONSES TO COMMENTS BY WILLIAM IRELAND
1. Relevant conclusions from the Lower Ross Valley Transportation Study are now summarized in paragraph 4.71.

127 Manor Road
Fairfax, California
June 24, 1977

District Engineer
Corps of Engineers
211 Main Street
San Francisco, California

Re: ARMY CORPS EIS DATED MAY 1, 1977 - Shopping Center
in Corte Madera, California

After studying this report, I have come to the conclusion that the Army Corps should do its job and deny this Hahn Corporation a permit to fill on bayfront land. This is no place for concrete structures. Evidently, you have not taken a good look at what is happening to the bay, nor what is happening to our environment in the Lower Ross Valley. I am told that at least two other transportation studies are done which gave proof that our streets and highway 101 cannot take any more traffic without major blockage. The Town of Corte Madera already has an ample tax base. Leave that marsh be. This is not just another piece of real estate.

William Ireland
WILLIAM IRELAND

cc: Secretary of Interior
Cecil Andrus

RESPONSES TO COMMENTS BY A. R. LUBERSKY

1. The traffic analysis in this FES has been updated and substantially revised based on Livingston and Associates' June 1977 EIR for the Marin Mall project.

131 Stewart Drive
Tiburon, California
June 25, 1977

H. A. Flertzscheim
District Engineer
Corps of Army Engineers
211 Main Street
San Francisco, California 94106

Ref: Army Corps Proposed Final EIS of May 1977
Filling of Corte Madera Marsh

After reading the above report and noting your statement on page 33 that the State Dept. of Transportation is "presently widening highway 101 thru Corte Madera by the addition of one lane in each direction....." - something that was done about 3 years ago - I wonder how many other factual errors are contained in said report.

I and many, many other persons regard the building of a massive concrete shopping mall on this marsh (one of the last remaining in Marin) with considerable dismay. The Army Corps should take seriously one of its major responsibilities to the people of this country: preservation of all remaining wetlands. This is especially true where a development such as the Rahn project is not only not required, but has been fought bitterly for four years by all responsible persons in Marin County. The Corps is well aware of this fact.

Mrs. A. R. Lubersky
Mrs. A. R. Lubersky

Copy: Hon Cecil Andrus
Secretary, Dept. of Interior
Washington, D. C.

*Event
7/2/77*

RESPONSES TO COMMENTS BY AUGUST AND NANCY BLUME

157 Sycamore Avenue
Mill Valley, California
June 25, 1977

H. A. Pletzsche
Colonel, Army Corps of Engineers
211 Main Street
San Francisco, California 94105

Ref: Environmental Statement May '77 - Hahn Mall

Dear Sir:

Our response to this statement centers around our extreme concern regarding the great amount of damage which this kind of project will do to the fragile ecology of the marsh. The filling operations will surely be disruptive if not fatal to the plant and animal life. We cannot tolerate any more obliteration of our shrinking bayfront lands. The quality of the air in the Lower Ross Valley has worsened to an alarming degree in the past few years. There is no more room for the kind of damage the Hahn Center will inflict with its thousands of cars.

We want to vigorously protest the granting of a fill permit to this developer. Shopping centers are not proper projects to be placed on marshland.

Yours very truly,
August Blume
August Blume
Nancy Blume

cc: Cecil Andrus
Secretary of Interior

- i. This environmental statement attempts to present the impacts the project would have on the elements of the physical and human environment. Air quality impact is discussed in Section 4.48.

499 Corte Madera Avenue
Corte Madera, California
June 27, 1977

Col. H. A. Flertzhelm
U. S. Army Corps of Engineers
San Francisco District
211 Main Street
San Francisco, California, 94105

Subject: Regulatory Permit Application by Ernest W. Mahr, Inc.

Dear Colonel Flertzhelm:

I can well appreciate the difficulties confronting the Corps in regard to the processing of this permit application. During the five years since the original application was filed so many factors have changed and the problems of analyzing and evaluating the issues have become incredibly complex.

However, the Corps must not allow the complexities of the situation and the pressures brought about by the long delays in making a decision to result in anything less than a determination which is supported by the evidence. The Corps' Environmental Impact Statement clearly reveals that:

- (1) Most of the property is, by Corps definition, "wetlands" lying below Mean Higher High Water;
- (2) Massive amounts of fill transported in 20,000 truckloads would be necessary prior to any construction on the site;
- (3) Permanent destruction of wetlands and wildlife habitat would result from filling and construction operations;
- (4) Views of the Bay would be lost from nearby Scenic Highways;
- (5) A high potential for ground failure exists because of underlying Bay Mud;
- (6) Intense traffic congestion would bring circulation in the area to a standstill during peak hours;
- (7) The Marin Municipal Water District cannot supply the shopping center with adequate water in the foreseeable future;
- (8) Local government has opposed the issuance of a Corps fill permit;
- (9) The citizens of Corte Madera have expressed their opposition to the shopping center by voting against it in an 81% voter-turnout in last November's general election.

There are factors the Corps must weigh in making its decision on the fill permit. That decision will, I assume, be based on factual information contained in the Final EIS. For that reason I feel it is important to have the Final EIS accurately reflect the facts concerning the area and the proposed project. Therefore, I am grateful for this opportunity to point out the following inaccuracies in the Proposed Final EIS, most of which are simple failures to update information compiled by the Corps over three years ago when the original document--the Draft EIS--was prepared.

RESPONSES TO COMMENTS BY JACK HAEHL

1. This portion of U.S. 101 is not officially designated a Scenic Highway.
2. Neither the Proposed Final or this Final EIS reach this conclusion. The surcharging would be done within the limits of good engineering practice.
3. The results of this advisory election are now described (see paragraph 1.17).
4. The current plan for the site does include use of the railroad right-of-way.
5. The economic analysis has been redone and now includes this information.
6. This report does not represent Corte Madera as seeking to exceed the constraints of SB 90.
7. The EIS describes current state practice.
8. The purpose of the proposed fill is not to raise the site above the level of tidal action, but rather to provide firm ground upon which to build. Protection from tidal flows is already provided by dikes.
9. The existing channel would be filled according to the current plan.
10. Details of the wildlife management plan have not yet been formulated; this question must be considered in forming such a plan. The Fish and Wildlife Service will not allow a decrease in water quality within the mitigation areas.
11. These dates have been changed.
13. The exact acreage of the wildlife preserve has not yet been settled; the question remains open to negotiation between the Town and the developer.
14. This FES uses California Department of Finance population figures.
15. This description has been deleted.
16. The Town's Planning Department feels this figure is reasonable.
17. Comment noted.

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RESPONSES TO COMMENTS BY JACK HAEHL (Cont'd)

18. The text has been revised.
19. This discussion has been updated.
20. The text is now corrected and refers to the Heerdt Marsh as the Corte Madera Ecological Preserve.
21. Comment noted.
22. This plan is still under study by the various Marin treatment jurisdictions.
23. The information in this FES is based on more recent Marin Municipal Water District data (Document A-30, Appendix A).
24. The section on water supply has been updated.
25. This section has been updated.
26. Text updated.
27. Status updated.
28. Prior to issuance of local authorization, the Town would insure that fire protection is adequate.
29. Traffic sections have been revised and updated.
30. Text corrected.
31. The traffic analysis has been revised.
32. Traffic data has been updated.
33. Traffic data has been updated.
34. The Marin Mall proposal does not include plans for such a system.
35. Comments noted. These questions are currently under negotiation with the Town and must be resolved before the Town's permit is granted.
36. The Town will insure conformity before they authorize the project.
37. Reference deleted.
38. Deleted.

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RESPONSES TO COMMENTS BY JACK HAEHL (Cont'd)

39. Deleted.
40. Deleted.
41. Comment noted. Section has been rewritten.
42. The land offered as mitigation by the applicant is intended to balance the adverse impacts of the project.
43. Comment noted.
44. Population data has been updated.
45. Traffic analysis has been rewritten and updated.
46. Traffic analysis has been rewritten and updated.
47. There are currently no firm plans by the Town to carry out the roadway improvements.
48. These construction impacts are noted (paragraph 4.73). New road construction, if it occurred, would mitigate some road damage (if this did occur).
49. Comment noted. Traffic analysis is revised.
50. The mitigation offered by the applicant is discussed in the Project Description. This mitigation is for the currently proposed project which already constitutes a scaled-down version.
51. The population data has been updated.
52. The Corps is not requiring a dynamic analysis of the developer. The Environmental Impact Report of Livingston and Associates (1977) considers this question as does this Final Environmental Impact Statement. No obvious hazard has been identified. The District renders no engineering judgement here, neither does it assume any liability for the integrity of the structure. These responsibilities lie with the developer and possibly with agencies issuing building permits. There are always some risks associated with building, and known risks involved with building on Bay Mud.
53. Please refer to response to comment No. 52 above. Refer to Section 3.06 for discussion of general plan conformity.

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RESPONSES TO COMMENTS BY JACK HAEHL (Cont'd)

54. Table B indicates that the 0600-0900 standard for organics would be exceeded for each alternative considered.

55. The discussion of the general plan has been updated.

56.-62. Out of date information has either been updated or deleted.

63. The Bridgeway Interchange is about three miles south of the Marin Mall site, near Sausalito.

64. Project mitigation is now discussed in paragraph 1.38.

1.14 Although the EIS states that the proposed site is now located entirely west of the Northwestern Pacific railway right-of-way, I believe that the current Hahn proposal does, in fact, show a use of portions of that right-of-way.

1.15 Economic Analysis. (also paragraphs 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22) By using the January 1973 economic analysis prepared by Urban Projects, Inc., for the Corte Madera Redevelopment Project as the basis for evaluating the economic impact of the proposed project, the Corte EIS appears to be overlooking both a later statement in the EIS acknowledging that the Redevelopment Plan has been scrapped as well as an up-to-date economic impact analysis prepared within the last year by Leilane Associates which provides more current data.

1.23 In discussing what the EIS imagines to be Corte Madera's need to obtain tax revenues beyond what the limitations of SB 90 allow, the EIS fails to note that not once since the passage of SB 90 four years ago has Corte Madera levied the full property tax rate which SB 90 would allow. In fact, the present property tax rate is substantially below that permitted under SB 90 and a further 17% tax rate reduction is anticipated this year. Thus, all statements tending to justify the project on the basis of Corte Madera's supposed need to exceed the constraints of SB 90 are misleading and contrary to fact.

1.24 Since virtually all the information dealing with anticipated costs and revenues in future years is by necessity speculative, shouldn't there be some mention of the fact that the California legislature has indicated its intent to "equalize" distribution of sales tax revenues on a regional basis, thereby depriving cities like Corte Madera of some anticipated revenues? It should also be mentioned that there is current consideration being given in Sacramento to re-distribution of property tax revenues, which would impact local government in much the same way that the Serrano decision has impacted school districts, thus decreasing any local benefits that might otherwise accrue due to increased development.

1.28 Since the EIS points out that within 50 years the finished floor elevations will have subsided to 4.8 feet above Mean Lower Low Water, which is two feet below the highest tides in the area and almost one foot below Mean Higher High Water, shouldn't there be some mention of the costs to the Town of Corte Madera to keep the project area from flooding during periods of heavy rainfall and high tides, with or without pump failure?

1.31 Are we to understand from the EIS that the existing channel along the east edge of the site would be filled? Information from the U. S. Dept. of the Interior, Fish and Wildlife Service, leads us to believe that filling of this channel, which has a high ecological rating, would not be permitted.

1.33 Documents A-10 and A-11, referred to in this paragraph, give no indication that the U. S. Dept. of the Interior, the U. S. Environmental Protection Agency, or the Fish and Wildlife Service concur in plans to place disinfectants in the ponds which are to be dedicated for wildlife habitat.

1.34 Since the EIS states that even after the fill was placed it would have to settle for at least 12 months prior to removal of surcharge and subsequent start of construction, why does the EIS still state that "the projected opening date is between the fall of 1978 and spring of 1979, or later depending on the water moratorium situation"?

1.38 The EIS should note that the dikes on the Muzzi property were breached one year ago.

13 4.66 It should be noted that the Corte Madera General Plan stipulates that a 22-acre area containing the ponds shall be dedicated for open space and wildlife habitat, not 26.5 acres as presented in the applicant's plan.

2.00 ENVIRONMENTAL SETTING WITHOUT THE PROJECT

14 2.03 The Marin County population projections are not accurate and up-to-date according to the Marin County Planning Department, which last year revised its 1985 projection downward by a considerable amount.

15 2.13 The existing Corte Madera Center is not "fully developed" as stated in the EIS. It has a major undeveloped site near the southwest corner of the mall.

16 2.14 There is some question about the statement that the existing shopping center provides approximately 25% of the total tax revenues to the Town at this time. The statement is referenced to a 1974 EIR provided by the management of the center.

17 2.15 The renovation of the existing shopping center which is referred to was never pursued by the management and there are no current proposals for upgrading it, although it has changed hands again recently and there is always a chance that the new owner may be more receptive to the Town's desire to see it improved.

18 2.16 The Larkspur Disco discount store referred to went out of business in 1973.

19 2.19 Information regarding the proposed Larkspur Regional Shopping Center should be updated since it is referenced to a 1973 EIR which bears no relationship to the proposal submitted late last year for a different and considerably smaller project.

20 2.24 This paragraph should reflect the facts acknowledged elsewhere in the EIS concerning the Golden Gate Bridge District's acquisition of the Muzzi property and the breaching of the dikes which took place in the summer of 1976 as part of a required marsh restoration program.

21 2.29 The EIS should note that the Heerdt Marsh was purchased in 1976 by the State of California as an ecological reserve under the jurisdiction of the California Department of Fish and Game.

22 2.54 It is doubtful that Sanitary District No. 1 still anticipates that its treatment facility will be consolidated with that of San Rafael by 1980.

23 2.57 Following the past two years' drought experience, the Marin Municipal Water District has revised its "her safe yield" figures downward by one-third, so the 1973 Sedney/Coble reference should be updated.

24 2.58 The section dealing with future water supply is very much out-of-date and should reflect decisions and results of elections in recent years.

25 2.59 This paragraph also does not reflect current information.

26 2.67 This paragraph does not reflect current status of the Muzzi property.

27 2.101 The California Highway Patrol received Town approval for a new building on San Clemente Drive in 1975 and such a building is presently being constructed.

28 2.102 References to a Five-Year-Fire-Defense-Plan are out-of-date.

29 2.105 References to proposed work by CalTrans are out-of-date in that the "proposed work" was completed in 1975.

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30 2.100 Descriptions of Tualupa Drive are inaccurate. For instance, from Eastman Avenue to Piskey Avenue, Tualupa Drive actually has two lanes in each direction and no parking on the north side.

31 2.109 Descriptions of San Clemente Drive are not accurate. For instance, although the EIS states that there is parking in each direction, in fact there is parking only on the west side.

32 2.111 Contrary to the EIS, the Town of Corte Madera has no plan to widen Paradise Drive between Irizaru Royal and Westward Drive to provide two lanes in each direction.

33 2.112 Descriptions of Madera Boulevard are not accurate. The street is striped for two lanes in each direction rather than one beyond Mollaw Avenue and the median strip in that area is considerably less than ten feet wide.

3.00 RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS

34 3.07 While the EIS states that the Marin Countywide Plan recommends that the proposed shopping center be linked physically, visually, and by an internal transportation system (including walkways and bicycle paths) to the recently-completed ferry terminal, the shopping complex west of the freeway, and nearby residential and industrial areas, the EIS does not indicate whether or not the proposed project complies with these recommendations.

35 3.12 Contrary to the EIS, the proposed shopping center is not consistent with the land use policies in the Corte Madera General Plan in at least the following ways:

(1) The General Plan limits the development to 45 acres rather than the 56.2 acres proposed; (2) the General Plan requires permanent preservation of 32 acres of marsh rather than the 28.5 proposed; (3) the zoning ordinances implementing the General Plan limit height to 35 feet whereas the proposed project includes buildings 42 feet in height; (4) the project's impact on environmental resources is inconsistent with the Open Space and Conservation element of the Corte Madera General Plan; (5) the proposed project is in conflict with the policy which runs throughout the General Plan stipulating that the small scale and "small-town character" of Corte Madera shall be maintained.

36 3.14 Since the EIS notes that the Town is currently in the process of revising its zoning ordinances to assure consistency with the General Plan as required by state law, it should also note that the proposed building heights would not be permitted under the new zoning ordinance.

4.00 THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

37 4.05 The EIS reference to the negative impact on the existing center created by the relocation of J. C. Penney apparently refers to a 1973 proposal to include a Penney's store at the Muzzi center. This plan was abandoned in 1974.

38 4.07 Out of date.

39 4.13 Out of date.

40 4.14 Out of date.

41 4.16 In discussing what the EIS imagines to be Corte Madera's need to obtain tax revenues beyond those allowed under SB 90, the EIS fails to note that not once since the passage of SB 90 four years ago has Corte Madera levied the full property tax

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are which SB 90 would allow. In fact, the present property tax rate is substantially higher than that permitted under SB 90 and a further 17% property tax rate reduction is anticipated this year. Thus, all statements tending to justify the project on the basis of Cortes Madera's supposed need to exceed the limitations of SB 90 are misleading and contrary to fact.

It should also be noted that every property tax reform measure being considered by the State Legislature includes as a basic tenet total revenue limitations, so that no matter what additional sources of revenue are developed, the total amount of revenue will not be allowed to increase by more than a small inflation factor fixed by law. Thus, in all likelihood, the "goodies" which the EIS supposes could be financed by additional revenues could never be forthcoming under the new tax reform measures' total revenue limitations. The EIS should address this point as part of its conjecture about what could reasonably be anticipated in the future.

4.42 What mitigation is proposed in the EIS for the loss of ponding area and projected alteration of the present hydrological balance of the area?

IN FACT, WHERE ARE THE MITIGATIONS PROPOSED FOR ANY OF THE ADVERSE IMPACTS?

4.67 In making the stated assumptions regarding vehicular noise impact (d), it should be noted that the use of the railroad right-of-way for "150 buses during the commuter peak and about 15 buses per hour at all other times" is totally contradictory to the Circulation Element of the Cortes Madera General Plan.

4.77 The statement on "population growth predicted by 1977 due to the proposed center" is obviously out of date.

4.79 Update this information to show that a new California Highway Patrol facility was approved in 1975 and is now under construction.

4.84 References to traffic volume information developed in 1971 by Frischer Associates are out of date.

4.86 Assumptions that the Town of Cortes Madera might finance any traffic improvements on the highway to accommodate shopping center traffic are entirely without merit.

4.98 and 4.101 Shouldn't the EIS address itself to mitigation for the adverse impacts of excavation, 20,000 truck trips to place fill, noise and air pollution of the placement operation, and damage to streets and roads?

4.102 Some of this work, referred to as "proposed", has been completed.

9.00 COORDINATION AND COMMENTS AND RESPONSES

9.01 The mitigative conditions which the Department of the Interior and Fish and Wildlife Service has imposed on the developer--i.e., that he acquire and dedicate for fish and wildlife purposes the 28.5-acre area north of the project site, were agreed to by the developer in the context of the development of a 670,000 sq. ft. regional shopping center on 56.2 acres. This EIS refers to such a mitigation throughout the report in reference to adverse environmental impacts. What position would the Corps have taken if the applicant were to revise his application downward, for instance, to a shopping center half that size on half that acreage, and abandon efforts to acquire the 28.5 (32)-acre area with the ponds? Would a new application be required? Would a new EIS be required?

51 P. 78 Population projection estimates are questionable in view of new trends.

52 P. 80 In response to the comment that "specific investigation to determine rearm

data should be undertaken before filling," the EIS responds that "the expenditure of additional funds prior to obtaining approval for the placement of fill or prior to necessary approval to permit construction of the shopping center, does not appear feasible at this time." Isn't it important to get information of this sort before building permits are issued?

P. 83 In response to the question, "Why risk such potentially dangerous conditions as building in areas underlain by Bay Muds?" the EIS responds, "Land is open, available, and financially feasible for this type of development by zoning standards. Studies indicate conditions, properly handled, will not be more dangerous than other similar building projects." Governmental agencies are acting to fail and they can be held liable for damages if projects approved by them are subject to failure and both the County and the Town's Seismic Safety elements which are being reviewed indicate numerous hazard constraints in this area. The EIS should address the question of consistency with the Marin County and Cortes Madera General Plans more fully.

54 P. 90 Last response--unintelligible.

P. 97 There is no "Proposed Cortes Madera General Plan. It was adopted in August, 1975. Furthermore, the adopted Cortes Madera General Plan is not entirely consistent with these two regional plans and the local plan does have precedence.

56 Table 1 No longer relevant.

57 Table 2 No longer relevant.

58 Table 3 Out of date.

59 Table 12 Are 1971 figures the best that are available?

60 Table 18 1970 housing figures are so out-of-date as to be worthless.

61 Tables 21-22-23 1971 figures are out-of-date.

62 Table 23 What is "Bridgeway Int.?"

63 NOWHERE IN THIS REPORT DO I SEE MITIGATION OF ADVERSE IMPACTS ADDRESSED IN A MEANINGFUL WAY. SHOULD THE PUBLIC ASSUME THAT SINCE VIRTUALLY NO MITIGATIONS ARE PROPOSED, THE ADVERSE IMPACTS OF THE PROJECT ARE MIN-MITIGABLE? IF THIS IS THE CASE, THEN THE PERMIT MUST SURELY BE DENIED ON THIS BASIS!

Thank you for your consideration of these comments.

Respectfully submitted,

Jack Noel

June 27, 1977

In The Matter of Proposed Final Environmental Statement, Marin Mall Regional Shopping Center, Marin County, California . . .

To the United States Army Corps of Engineers, respectfully submitted in conjunction with a Public Hearing in Corte Madera, California, this date.

"We shall require a new manner of thinking if man is to survive."

These are the words of Albert Einstein.

The various ecological, the environmental, impacts of the proposed development are, of course, basic, and, in themselves could constitute reason to approve or reject the application. However, the economic factor, closely related, has been included. We cannot logically evaluate any project in Marin County without reference to the County and City General Plans, mandated by state law and developed over a period of years with a great deal of citizen input and no small expenditure of tax money.

By the very title it assumes the proposed center is of regional concern - at the very least county-wide. Its impacts must therefore be evaluated on a county-wide basis; that is, in relation to the aggregate of the County and all the Town and City Plans. It is by no means a mere Corte Madera issue.

It is my solemn and thoughtful conclusion that the factual data presented in the document we are addressing and in those submitted by Urban Projects and other agencies, subjected to cold and competent, and impartial, analysis, condemn the project on environmental grounds alone.

I am disturbed by a rather general failure of environmental reports to recognize an essential balance of those elements mandated by California law and thereby embodied in the General Plans. The Housing Element is notably slighted. Most serious Traffic Element problems are brushed off with no firm assurance of remedial measures by state authorities. There are frequent allusions such as "steps to be taken to improve habitat condition" which are nothing more than vague, unaccepted half-promises.

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DOCUMENT F-23

RESPONSES TO COMMENTS BY GLENN MEACHER

1. This FES includes information on the plans of several jurisdictions, including Corte Madera, its neighboring communities, Marin County, and the Bay Conservation and Development Commission. The comparability of the proposed development is compared to each of these plans.
2. The developer has considerable expertise in the selection and development of similar commercial facilities. The most extensive recent market analysis was prepared by Lord and LeBlanc (1976) and is printed in the Draft EIR prepared by Livingston and Associates for the Town of Corte Madera.
3. The success of Marin Mall will not require "capture" of business which might now be leaving Marin County. The discussions in marketing analysis of "capture" are aimed at the question of whether there will be enough market demand after building Marin Mall to support existing local merchants. These questions are addressed in paragraph 4.03ff.
4. Comment noted.

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2 Having recognized the imperative of competent, unbiased, evaluation of all elements, I should now deal more specifically with the economic viability of the project. Economic Viability must be judged by the needs of the people at present, plus increases consonant with the Aggregate General Plan, within the time factor there expressed, and without building up fiscal pressures calculated to rupture the Plan. I do not find in any of the literature assurance that this phase has been addressed with adequate experience or expertise. Has a top-rated actual merchandiser, or one who chooses sites for a mass retailer, been consulted? What, it may now be asked, are my credentials?

The answer: - I have been thirty years in retail merchandising - including selling, sales promotion, advertising and public relations; twenty of those years in Wards National Offices.

The claim of economic viability rests almost entirely on the prospect of "capturing" a substantial portion of the estimated \$45 millions of Marin dollars annually "exported":

Two omissions invalidate the assumptions and purported data:-
1) Admittedly they ante-date the Sears store in Terra Linda. This all-line Department store of the world's largest retailer could gobble up the entire \$5 million, without feeling any strain.
2) There is no recognition of the very real prospect of a county-based shopping center in the abandoned Hamilton Air Force Base. With three of the County supervisors determined and one swerving; with probably half a million of County tax dollars on the line just to keep the thing idling through this year, there will be a BIG, BIG, shopping center plan for Hamilton if that is what it takes to bail them out. It has been actively discussed recently by The Board.

With all these negatives on the balance I won't more than mention plans brewing for Larkspur, Tiburon, Belvedere and here there and yonder, which involve no major environmental assaults.

The hope of capturing exported sales is predicated on an assumption that more than 30% now goes to Stonestown and Serramonte. I should like to see the purported survey that produced this amazing figure. What was the size, the nature, the locale, of the sample? I frankly find it unbelievable. I am familiar with these Centers, having shopped there when I lived nearby. They offer nothing significant not found in present Marin stores, especially since Sears opened here. It costs no less than \$5 average in gasoline, bridge tolls, etc., for a Marin resident to shop there, with the prospect of maybe a lunch to boot. It makes no sense.

As I stated before the Corte Madera Planning Commission:-
Those exported sales, however much they be, are a typical phenomenon of any metropolitan area and derive from two basic facts:-

- 1) The Central City, or Nucleus, offers certain goods and services, including entertainment, for the entire area, and for tourists, which cannot be profitably merchandised to a more limited market.
- 2) The large number of commuters-to-work from any satellite into the Central City will inevitably make substantial expenditures there, partly as a matter of sheer convenience.

Talk of capturing any significant portion of these sales is pipe dreaming. Let me cite two personal examples:- I wear, by prescription, a type and last of shoe I cannot find in Marin; interested recently in home wine making supplies, I could not find any in Marin. Can Mr. Rubin guarantee me I will no longer have to cross the bridge for these items once his Center is built?

In conclusion, I solemnly assert that nothing except an increase in Marin County's population far beyond the maximum to be tolerated under any reasonable interpretation of our Aggregate Plan will come close within this century to providing economic viability for now-existing retail facilities plus even one-half of the total expansion seriously contemplated.

I find no choice but to interpret what I see as an ominous, massive, assault upon ^{that} orderly planning designed to preserve an ambience and a way of life for which the people of Marin County have overwhelmingly and often indicated their firm desire, and which they have sought to establish within the mandates of State Law.

Whether this assault, which I see amounting to a conspiracy, is coldly calculated or merely the tacit result of a disorderly condition is immaterial as to the disastrous end result which can be only the end of Marin as we know it and want it.

Marin's natural environment, in delicate balance, inherent and peculiar to that preferred ambience, cannot survive such an assault.

Indeed, "We shall require a new manner of thinking if man is to survive."

Respectfully and Most Sincerely Submitted

Glenn B. Meagher

Glenn B. Meagher
7 Crest Road
Fairfax, Ca. 94930

DENIS KLIENE
134 GRANADA DRIVE
CORTE MADERA, CA.
94925.

Col. H. A. Flather Jr.
Dept. of the Army
San Francisco Dist.
Corps of Engineers.

Sir, My concern is air pollution in the Shopping Center Area, which is part of my environment.

I refer you to Page 54 - para. 4.62 and to Table B. - which shows that

"A Standard is only exceeded in organic" and goes on to point out that there is an excess - ten times the Federal Standard in the 0600 - 0900 period.

These figures and the projections for 1985 were prepared in 1976 and I believe were based on auto emission standards being enforced by 1978, however the Senate has delayed enforcement till 1980 or perhaps even later, making these figures more than optimistic and probably invalid.

In other words we could have pollution substantially higher than Table B shows

RESPONSES TO COMMENTS BY DENIS KLINE

1. Emission factors are subject to frequent revision and care should be taken to use currently accepted factors. The emissions data used for the air quality analysis was supplied by the Bay Area Air Pollution Control District (1975). The 1976 data should be a reasonable representation of existing conditions. Lower 1985 emissions estimates are based on government projections and requirements. You are correct in saying that the data presented may be optimistic; on the other hand, it may be pessimistic. We cannot predict what will happen in terms of future legislation and technology and, therefore, our most reasonable estimates of project impact are based on current requirements and government projections.
2. Comment noted. Although the standard would not be exceeded and the concentration would be lower than 1976 levels, the 77 percent increase resulting from the project would be substantial.
3. Alternatives 2 and 3 were compared because they essentially represent a worst case situation. The data for Alternative 4 is provided in Table B and, as you have stated, the concentrations under this alternative are the lowest overall.

in every category.
If you look under the heading "Carbon Monoxide" - max 8 hr. period, you will note, the national standard is 1000ppm and that Alternative 5 does not exceed it, however I believe that should be some concern that infact we will have a 77% increase in Carbon Monoxide in the 8 hr period.

Comparisons have been made between Alternatives 2 and 3 and Alternatives 1 and 5.

I would like to know why no special mention has been made about Alternative #4 i.e. in 1985 "No Shopping Center with two additional heavy lanes would result in the least pollution of all alternatives THE CLEANEST AIR POSSIBLE. and if we are concerned about real values and future generations perhaps we should find ways to work towards this goal.
Clean air is in the public interest and the Corps of Engineers has a responsibility to consider and protect the public interest

Sincerely
 Denis S. Kline

Colonel H. S. Flitzheim, Jr. RE: Review of EIS June 27, 1977
from Alice V. Higgins

I have chosen traffic because I feel the residence of Corte Madera and communities of northern Marin County will be affected most by this change. The chart used by the Corps of Engineers was prepared by Donald Frischer and Associates in 1971, Table 22, Plate 13 estimated Traffic Volumes, Existing Street Networks prepared in 1974 by U.S. Army Engineers district. This material all appears to be antiquated. The Livingston & Associates have presented changes for the Tamalpais overpass which includes 3 stop lights, ramp changes, and includes many changes in back streets.

I will briefly go over the chart showing these changes for those who may not have been present at other meetings.

The Livingston Draft gave 16,000 cars per day-which is 32000 cars in and out. Both East and West Corte Madera will exit going north from 101 via Paradise to the first stop light, on Tamalpais where the Hahn Shopping center may be entered. East Corte Madera will have a free turn, West Corte Madera will turn on Stop light to next light on Tamalpais overpass, then to Madera Avenue 3rd Stop light. With these stop lights traffic is expected to back up on 101 to Alto.

Secondary streets are expected to move at stop and go. This slow moving traffic will according to Harrison, Marin County Transit District Inter-office Memorandum Oct. 20, 1977 will cause "---- a transportation situation of major impact which would significantly alter the life style and environment immediately surrounding the shopping center property." Should all these measures of mitigation recommended by the EIR be completed (over \$2 million in capital work) traffic will move on most streets, (Highway 101 may move slowly) but the character of the area will be radically changed to one of major arterials (some 6 lanes) and long delays at multi-phased traffic lights:

The shopping center would demand such changes that it will be

RESPONSES TO COMMENTS BY ALICE HIGGINS

1. The traffic analysis (Sections 2.93 and 4.63) in this document has undergone substantial revision. The new analysis relies heavily on information provided in the Livingston and Associates EIR (June 1977).
2. The table included in paragraph 4.68 outlines the impact the project might have on "service levels" in the area. It should be noted that serious traffic problems exist and will continue to exist with or without Marin Mall. Road improvements which will radically change the character of the area may eventually be necessary anyhow.
3. Comment noted. The election results are presented in paragraph 1.17.
4. The election definitely represents one segment of the "public interest." The Corps must, however, consider the "overall" public interest. The local opinion is very important, but impact on all levels of government and all types of interests must be weighed. Also, the election does of course not represent the entire populace of Corte Madera. Elections such as this quite possibly tend to draw out the opposition--the people who probably have the strongest feelings one way or the other.

3 impossible to CONSERVE OUR SMALL TOWN atmosphere. The vote of the citizens last November resulted in 54.5% against the shopping, 41.9% in favor and 3.6% who declined to vote.

4 According to directive DAEH-CWO. #1 21 Jan. 1976. Subject-Corps' Wetland POLICY UNDER PUBLIC INTEREST. "no permit will be granted unless issuance is found to be in the public interest." Accordingly the permit should be denied or not granted because the election in Corte Madera showed the PUBLIC INTEREST was against the Shopping Center.

W. H. Higgins
W. H. Higgins
11000 S. Street
San Jose, CA 95138

Gary L. Holloway
907 Sunnybrae Lane
Novato, CA 94947
June 27, 1977

Colonel H. A. Florisheim, Jr.
U.S. Army Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Sir:

The vehicular circulation and traffic information used in The Proposed Final Environmental Statement for The Marin Shopping Center is "getting cold" as it is over six years old. For example, average daily traffic counts (on U.S. 101 and Paradise Drive, etc.) have risen. The freeway is now completed from The Golden Gate north to Cloverdale, and various improvements have been made to its capacity by the addition of new travel lanes at Tiburon and Corte Madera, plus the San Rafael Viaduct.

However, the crucial impasse which the environmental statement fails to recognize is the immediate access to the site by vehicular users. Almost 100% of the potential shoppers will come and go by private automobile, using U.S. 101 as the principal access route. And, the majority of traffic will be generated from the central and north county areas (Ross Valley, San Rafael, Novato), where the bulk of Marin's population live. As a Novato resident I could either use the Lucky Drive access to the north or plunge into the Tamalpais Drive interchange, at present woefully inadequate to serve even local daily needs. Either way, my trip to the shopping center would involve numerous turning movements, signal, and points of traffic conflict that is, assuming that Caldot had improved the Tamalpais Drive intersection.

As it now stands, this interchange is the key to all access to the proposed shopping center, and the statement to my mind somewhat of a moot point. Caldot should record as stating that it has no current plans for reconstruction or alteration of this interchange. The cloverleaf type of interchange found here is no longer used by Caldot because it has built-in traffic conflicts with merging traffic.

The Marin proposal and its attendant traffic problems should be related to the Coddingtown Shopping Center situation in Santa Rosa, which is very comparable. It has (now) the diamond type of interchange being proposed, a 6-lane arterial street (Steele Lane) and a multitude of traffic lights to control flows and monitor massive left-turn movements into the center. The points of traffic conflict are numerous and it often takes several signals to get through an intersection. And this with almost identical access as is proposed for the Marin Mall.

In summation, the environmental statement needs to be updated relative to the access and transportation information, and, to be meaningful, compared with existing regional shopping centers at Terra Linda and Santa Rosa. Traffic impacts will be felt on all major streets within the Corte Madera/Larkspur area, while most of these streets are now at their design capacity. Priority needs to be given to the users of these streets, and to existing land uses (residential, commercial, light industrial) which constitute the community of Corte Madera, rather than trying to accommodate (and attempting to justify) the imposition of a new major regional shopping center.

Sincerely,

Gary L. Holloway
Gary L. Holloway

F-93

DOCUMENT F-26

Col. R. A. Florisheim, Jr.
U.S. Army Corps of Engineers
211 Main Street
San Francisco, CA 94105
Ref: Environmental Statement
Dear Col. Florisheim:

I have read the proposed center or any other center. This land is always implicit in the proposal.

The only people in the area are the people who live there. The people who live there are the people who live there.

Regarding the proposed center, the proposal is to build a shopping center. The proposal is to build a shopping center. The proposal is to build a shopping center.

2. BODC in the area. The proposal is to build a shopping center. The proposal is to build a shopping center. The proposal is to build a shopping center.

We remind you that the center is to be built in the area.

cc: Hon. C. Secret

RESPONSES TO COMMENTS BY GARY HOLLOWAY

1. The traffic analysis has been updated. The new information is primarily based on data provided in the June 1977, Marin Mall EIR prepared by Livingston and Associates.
2. Comment noted. The report acknowledges that various improvements are considered desirable.
3. Discussion between the Town of Corte Madera, the State Department of Transportation, and the applicant has taken place concerning improvements to the Tassalpais Drive interchange. To date, there are no firm plans by the appropriate agencies to carry out these improvements.
4. The State Department of Transportation normally considers similar "situations" in planning highway projects. The success or failure of existing interchanges would certainly be taken under consideration.

June 27, 1977

197c Brude
Bran

H.A. Flertzhain, Jr.
District of the Army
San Francisco District, Corps of Engineers
211 Main Street
San Francisco, California

Dear Colonel Flertzhain,

I respectfully request that the Army Corps of Engineers deny the application of Ernest W. Hahn, Inc. for the following reasons placed in the context of the Army Corps final environmental impact statement:

- 1) the population base for the project has declined,
- 2) the project's economic base is unfavorable,
- 3) its economic benefits are questionable,
- 4) the project promises no real open space gains,
- 5) the project will make access to both East and West Corte Madera more difficult,
- 6) the project is out of scale with the size of the town, ✓
- 7) it violates the principles of the General plan, and
- 8) to grant the permit would deny the will of the electorate.

1 / Population Base

Projections for a successful Marin Mall are based on a growing population. Current figures show that population has declined in Corte Madera and the Ross Valley.

The 1976 figure for Corte Madera population is 8310, a sizeable decline from the 1970 figure of 9082 (EIS Table 3). The lower Ross Valley itself declined in population from 20,535 in 1970 to 22,735 in 1976.

The 1976 Marin County Planning Department estimate for the total Marin County population is 220,000, a full 10,000 less than that projected by the EIS for 1975.

IS THIS THE STRONG POPULATION BASE EXPECTED TO SUPPORT THE MARIN MALL?

2 / Economic Base

The EIS states, p. 15, that 80-85% of the support for the center would come from the area immediately around the site. Immediately is not defined, but it may mean the lower Ross Valley: Corte Madera, Larkspur, Kentfield and Greenbrae.

The EIS states, p. 43, that the center will generate an excess of \$65 million in retail sales each year. Given no decline in the present population of the lower Ross Valley and dividing \$65,735 into \$44 million dollars (80% of the Marin Mall sales) the result is \$1479.72, the annual amount

RESPONSES TO COMMENTS BY BRENDA BROWN

1. Population data has been revised. The figures now given were provided by the California State Department of Finance. This data appears to indicate that population growth in the market area would support an additional 670,000 square feet of retail space countywide by 1980.
2. The revised economic analysis does not rely on these figures. The population of the "immediate area" is defined as census tracts 110 through 1290.
3. State policy may change for the distribution of tax revenues. This report reflects current state practice.
4. The applicant will be required by the U.S. Fish and Wildlife Service to install "...water treatment facilities adequate to ensure that the quality of surface drainage water entering the mitigation area from the shopping center does not fall below its present level (Document A_28, Appendix A)."
5. The revised traffic analysis contained in this document considers the projects impact on a number of arterials and connectors. The lower Ross Valley Transportation Study concluded that the Marin Mall project would have a large impact on the U.S. 101 freeway, but that the impact on local streets might not be as great as that for other development planned for the general area.
6. This document attempts to provide project information and impact analysis so that the suitability of the project to its surroundings can be evaluated. The Town of Corte Madera General Plan is considered in Section 3.06. The project is in general conformity with the Plan. The Town must also issue a permit for the project and need not do so if incompatibilities with their plan should surface and be unresolvable.
7. This election is now discussed in paragraph 1.17.

P-97

THE TOWN OF CORTÉ MADERA

3. The Mall will not provide sales tax revenue. The revenue generated in the EIS. If a certain revenue bill is passed, 40% of additional property tax revenues involving commercial and industrial development and 40% of sales increases would be shared on a regional basis.

4. CORTÉ MADERA AREA

4. The 2.5 "e" space area proposed is left to the town may not adequately serve the purpose for which it is intended. Street water treatment will take place at the southern portion of this area, p. 3. After treatment methods may involve disinfecting the water if a high bacterial count materializes. The EIS does not state how this treatment and the construction of a catch basin would affect the goals of maintaining the area as a "natural" habitat area.

5. CORTÉ MADERA EAST AND WEST CORTÉ MADERA

5. Marin Mall will have a devastating effect on access to East and West Corte Madera. The EIS seems to ignore local residents in its analysis of traffic impacts. Marin Mall Drive is really the lifeline between east and west for residents shopping, dropping children at schools, visiting the library and friends, and yet the EIS does not consider possible traffic spillover to local streets such as San Clemente, Linden, Rural Vista and Corte Madera Avenue.

6. THE TOWN OF CORTÉ MADERA

6. The enormous size of the proposed Marin Mall would be a major objective in the General Plan and proposed zoning ordinance.

The sheer size of the project will have a tremendous impact on the town. The project covers 45 acres with 42 foot high department store buildings and 344 parking spaces. The parking spaces are more than the total number of housing units in Corte Madera. Nowhere in the EIS is there a discussion of what the massive scale of the project will mean to a town the size of Corte Madera and to its residential nature.

The proposed zoning ordinance which defines best specifically what to do on the town's General Plan as its first objective "provide... precise guide for the physical development of the town in such a manner as to preserve its essential residential character..."

7. THE ELECTIONS REQUIRED FOR CORTÉ MADERA

7. In the last general election, November 2, 1976, Corte Madera voted significantly to reject the Marin Mall with its 670,000 square feet along Highway 101. With 68.9% of the voters turning out, 54% voted against the mall.

54% voted against the proposed zoning ordinance

Yours sincerely,

Brenda Brown
Vice Mayor, Town of Corte Madera

P-98

RESPONSES TO COMMENTS BY MARY ANN JOHNSON

20 Corte Cordova,
Greenbrae, Ca 94904
June 29, 1977

Col. H. A. Pflertheim
District Engineer
Army Corps of Engineers
211 Main St.
San Francisco, Ca 94105

Re: Army Corps EIR 5/77: Hahn Mall on Corte Madera Marsh

Dear Sir:

I am opposed to your granting permission to the Hahn Co. to fill this marsh. You have said that you would not act contrary to the public interest. Over the years, you have had ample evidence from many persons from many places - not only Corte Madera, that WE DO NOT want another shopping center here. Most certainly NOT ON MARSHLAND. Because if you allow Hahn to chew up this marsh, what will prevent other developers from asking you to give them fill permits so that they can build up every single marsh in the bay area? You will have shown them the way to go by establishing a precedent. The Army Corps is supposed to PROTECT baylands.

My question is: why is the Corps so inconsistent in their permit granting? About a year or so ago, you denied a permit for a water reservoir tank to be built in San Mateo. According to a report I read, the reason you gave for that action was that you did not want to deprive the people of a valuable 5-acre marsh. Well, is the Corte Madera marsh any less valuable to the people of Marin?

At the last public hearing which the Corps held in Corte Madera (6/27/77) NOT ONE PERSON SPOKE IN FAVOR OF THE HAHN CENTER. I surely hope you will govern your action re the permit with that in mind. Thank you.

Sincerely yours,

Mary Ann Johnson
Mary Ann Johnson

copy: Hon. Cecil Andrus
EPA - Washington, D.C.
Brig. Gen Connell, Div Engineer

1. Future projects requiring Corps permits would each be evaluated on their own merits. The impacts of projects such as the subject activity are far too complex to allow for decisions based on simply the fact that an earlier, somewhat similar project, was or was not permitted. Also, the required legal process must be carried out for each application.
2. The earlier Hahn Proposal would have had more direct impact on marshland than the current proposal. The revised project, which is the subject of this FES, would not result in the destruction of an overly significant area of marshland.

52 Edison Avenue
Corte Madera, Ca 94925
July 4, 1977

Col. H. A. Plettzheim, Dist. Engr.
Army Corps of Engineers
211 Main St.
San Francisco, Calif 94105

Re: Your EIS on Proposed Hahn Regional Center in Corte Madera

Sir:

I was present at the public hearing conducted by the Corps in Corte Madera on 6/27/77. It struck me as being very singular that not a single person spoke in favor of Mr. Hahn's center, and that this developer made his appearance late.

Statements were made by the opponents of this project with which I strongly agree, for example:

1. The monumental overload on the highway and the inevitable crush that will come on the streets of Corte Madera as shoppers seek to avoid the highway at busy times. Highway 101 is already overly used and can ill afford another overlay, but the Army Corps EIS does not adequately consider the consequences of more traffic.
2. There is talk of "mitigation" with respect to the preservation of wildlife. But the idea seems to be full of "ifs". There is no guarantee that we can relocate wildlife in this situation. And the effect of noise, air and water pollution, etc., makes me question the assumptions made in the EIS.
3. The EIS makes no mention of the rather huge projects, either in progress or on the drawing boards for the Lower Ross Valley. For example, a "Cost Plus" complex is about completed at this writing an office complex is just about in a state of completion adjacent to the Larkspur Ferry Terminal; other shops are scheduled for this area; included would be development plans for the San Quentin Peninsula. According to the Lower Ross Valley Transportation Report, our highways and streets cannot accommodate such projects because they both are already taxed to and beyond capacity.
4. The inaccurate and outdated statements such as mention of two Disco stores which have been closed for several years.
5. No mention of the recent advisory election when the majority of the voters expressed their opposition (again) to this development.

For these and many other reasons so well stated on 6/27/77, I would very much appreciate that Mr. Hahn be denied a permit to fill here

Copies as follows:

Gen. Connell
EPA
Rep. John Burton
Sen Cranston
Dept of Fish & Wildlife

F-101

DOCUMENT F-29

Yours respectfully,

Gregory Adams
Gregory Adams

F-102

RESPONSES TO COMMENTS BY GREGORY ADAMS

1. The traffic analysis in this document has undergone substantial revision. The areas where it is felt that most severe problems will result have been described.
2. The fish and wildlife oriented agencies which require the mitigation are experts in such matters. The acceptance of mitigation lands is based at least partially on knowledge of existing wildlife areas which are also impacted by urban development.
3. The text has been updated to include these references. The Lower Ross Valley Transportation Study is discussed in Section 4.71.
4. The text has been updated.
5. The results of the election are now presented in paragraph 1.71.

39 Edison Ave.
Corte Madera, CA 94925
July 5, 1977

Comments concerning Army Corps EIS for Hahn Shopping Center:

On again, off again Army Corps finally decides Hahn Shopping Center within their jurisdiction.

It makes one wonder if indeed the Army Corps should be allowed to make any decision.

The concept of a national body to protect our Marsh Lands & Environment is good, but the way the Army Corps has chosen to implement these national concepts in Corte Madera leaves one with grave doubts as to the Army Corps integrity.

Since I am left with no other agency to which I can appeal I am forced to deliver the following comments to you.

1 Much of the EIS Report is out of date.

2 The Report does not mention the Lower Ross Valley Transportation Study.

3 It does not take into effect Corte Madera's Advisory Election. Storm water treatment is not dealt with adequately.

4 Not enough information concerning Seismic Hazards. Economic Impact on the Tax Payers of Marin County if the proposed Larkspur Regional Shopping Center & Hahn Shopping Center are built is not discussed.

A permit to fill for the Hahn Mall should be denied.

William Gordon

William Gordon

cc: EPA
Maj. Gen. J.W. Morris
Brig. Gen. Richard M. Connell
Congressman John Burton
Senator Alan Cranston
Frank Mickey Fish & Wild Life Services
Cecil Andrus Secty. Interior Dept.

RESPONSES TO COMMENTS BY WILLIAM GORDON

1. The FES has received extensive updating.
2. The text now includes discussion of this reference; see paragraph 4.71.
3. Information added, see paragraph 1.17.
4. Please refer to Sections 2.34 and 4.32.
5. Refer to 2.32 and 4.24 for seismic information.
6. See paragraph 4.05.

DEPARTMENT OF WATER RESOURCES
THE RECLAMATION BOARD

1615, Post Street, Room 222-18
San Francisco, CA 94104
(415) 443-9424



MAY 12 1977

Colonel H. A. Flertzheim, Jr.
District Engineer
San Francisco District
U. S. Army Corps of Engineers
211 Main Street
San Francisco, CA 94105

Dear Colonel Flertzheim:

Corte Madera, Marin County is outside the Reclamation Board's area of jurisdiction. We therefore have no comments on the Proposed Final Environmental Statement for the Hahn Shopping Center (Marin Mall Regional Shopping Center), Corte Madera, regulatory permit application by Ernest W. Hahn, Inc., recently furnished for our review.

Sincerely,

Paul L. Clifton

PAUL L. CLIFTON
General Manager

P-105

DOCUMENT P-31

Dept of the Army
U.S. Army Corps of Engineers
211 Main St.
San Francisco, CA 94105

Dear Sirs:

This is to register my response to having just read the proposed final environmental statement on the Hahn Shopping Center.

Prior to reading this document I was quite biased against the development. This has been a result of living in Corte Madera for a number of years and in particular during the Citizen Recall of '73. I felt this kind of public indication of anti-Shopping Center sentiment was sufficient to tell the Hahn Co. to pack their bags and look elsewhere. Apparently the land in question is not too good a pun to stomach that easily.

After reading the EIS, I've now become an even stronger supporter of having the area remain as is and serving as a model for other communities also faced with the to-do-or-not-to-do decision on development.

What most developers don't seem to realize is at stake here is not just how many bird and plants will be destroyed, but more at the core is the issue of when is enough, enough. Just how much can this County still be with the continuous encroachment of open space areas, few as there now are? Hahn and his gang don't have to live here during and after the development is built. The price for the quality of life we want to maintain is certainly at issue.

Sincerely, Harold Hansen

PS Please include comments
in public hearing record

P-106

DOCUMENT P-32

373 Hine Hill Rd.
Hill Valley, CA 94024
May 31, 1977
ack
wlm
rwr
vjm

1720 Norton Harvard Blvd.
Los Angeles, Ca 90027
June 11, 1977

Colonel H. A. Flertzheim
Army Corps of Engineers
Dept. of the Army
211 Main Street
San Francisco, Ca 94105

Re: Environmental Statement on Hann Mall in Corte Madera, Ca.

Dear Sir:

I have had an opportunity to review this document and my comments are in response to your announcement dated May 9, of a public hearing to be held on June 27 in Corte Madera.

I am a frequent visitor to this area whence I flee in order to escape the smog and proliferation of shopping "conveniences" in Los Angeles. The Lower Ross Valley, as I know it, cannot possibly survive the Hann development without suffering disastrous consequences to its environment. My last visit early in November 1976 coincided with a pronouncement in the San Francisco Chronicle that the Corte Madera area in Marin County was the most polluted of all Bay Area Counties. Further deterioration in air quality will most certainly occur if a 50-acre shopping center is built.

The Army Corps of Engineers will be derelict in its duty under Section 404 Program and Section 10 of the Rivers and Harbors Act, if it fails to protect the Corte Madera Marsh from destruction.

Yours very truly,

Margorie Peterson
Margorie Peterson

F-107

DOCUMENT F-33

113 Yolo
Corte Madera, Ca 94925
June 22, 1977

Colonel H. A. Flertzheim
District Engineer
Army Corps of Engineers
211 Main Street
San Francisco, Ca 94105

In Re: Army Corps EIS of May, 1977 - Proposed Hann Center

Dear Colonel Flertzheim:

I have studied your EIS relative to this development and am aware of the public hearing which is scheduled for June 27, 1977. I am surprised that you have not, apparently, taken into account the continued strong opposition of the people of Corte Madera (and elsewhere) to this mall. Denote Hann's appeal via letters and appearances in private homes in an attempt to sell his shopping center, 55% of us voted against it in last November's advisory election.

Also, in spite of all the publicity concerning our high incomes in Marin County - especially, Southern Marin - inflation continues to take its toll of our income. There is no sign that inflation is under control. It is almost impossible to buy a home today or, in the alternative to rent one at an affordable price. So, more and more of our dollars go for housing, autos and auto maintenance and gasoline. To say nothing of various other things that double and triple. We simply have to cut back on purchases in retail stores in order to feed ourselves and keep a roof over our heads. We simply cannot hand over our march so that we can let Hann build a mess of concrete shops on it where a good many of us will not have the wherewithal to do much buying.

Yours truly,

Anne Tashiri
Anne Tashiri

cc: Cecil Andrus, Secretary
Dept. of the Interior

F-108

DOCUMENT F-34

151 Sycamore Avenue
Mill Valley, Calif.
June 23, 1977

Col. H. A. Plertzhelm
Army Corps of Engineers
211 Main Street
San Francisco, Calif 94105

Subject: May 1977 Army Corps E.I.S re Shopping Center
& filling of Corte Madera Marshlands

I have studied your E. I. S. and to me the issue is whether we, the people of Marin County give up our marsh, allow our air and water to be polluted so that this hungry for dollars developer can build a visual atrocity where it does not belong. We can no longer tolerate "business as usual" and sit back doing nothing as our bay is totally ruined. There is very little left, and I ask you, the Corps, to rise up from your pork barrel and PROTECT IT.

Alta Fly
ALTA FLY

cc: Hon Cecil Andrus
Secretary of the Dept. of Interior

P. O. Box 185
Inverness, California
June 24, 1977

Army Corps of Engineers
211 Main Street
San Francisco, Ca 94105

Re: May 1977 Report in re Regional Mall on Marsh in Corte Madera

I am absolutely not in favor of such a thing being built on this marsh or any other marsh. This is not just a matter for the people living in Corte Madera. It will destroy a place where many of us have walked, young people have studied the wild life and plants for their biology courses, etc. The highway is already congested with cars and the air polluted very badly. It is the job of the Army Corps to save our marshlands.

Alice L. Williams
Alice L. Williams

cc: Secretary of the Interior
Mr. Cecil Andrus

F-110 DOCUMENT F-36

F-109 DOCUMENT F-35

153 Granada Dr.
Corte Madera, 94025
June 25, 1977

Army Corps of Engineers
211 Main St.
San Francisco, Cal. 94105

Re: Hahn Center (Proposed)
Corp EIR May '77

I am very much opposed to
this center. It is your duty,
as you have been instructed
and directed, to protect this
marsh. This is not the
place for any regional shopping
center. The people have said
time and time again "we don't
want it."

Lorraine Lordon

Mrs. Donald H. McLaughlin
1453 Hawthorne Terrace
Berkeley, California 94708

July 11, 1977

Col. H.A. Flertzheim, Jr.
U.S. Army Corps of Engineers
211 Main Street,
San Francisco, CA 94105

Re EIS on Hahn Shopping Center at Corte Madera

Dear Col. Flertzheim:

For several years, many of us have been struggling to preserve as much marshland as possible in Corte Madera. Therefore, I urge you to deny the fill permit which would accommodate a regional shopping center in Corte Madera.

Recently, I have read several articles showing the Corps' interest in the retention or creation of marshlands. Let's hope this one can be added to that list!

In 1972, a Hahn regional shopping center was overwhelmingly defeated in Berkeley. We are getting along just fine without it.

I hope this comment is in time to be included in the record and that you will give it due consideration.

Sincerely yours,

Sylvia McLaughlin
Sylvia McLaughlin

cc: General Richard Connell

APPENDIX G

TRANSPORTATION ELEMENTS

TRANSPORTATION ELEMENTS
FOR THE
ENVIRONMENTAL IMPACT REPORT
ON
MARIN MALL

De Leuw, Cather & Company
Engineers & Planners
April 1976

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CORPS OF ENGINEERS SAN FRANCISCO CALIF SAN FRANCISCO--ETC F/G 5/1
FINAL ENVIRONMENTAL STATEMENT, HAHN SHOPPING CENTER (MARIN MALL--ETC(U)
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CHAPTER I EXISTING CONDITIONS

INTRODUCTION

The purpose of this study is to assess the traffic impact of the proposed Marin Mall development as well as that of other identifiable developments on the local street and highway system, to recommend street and intersection improvements to minimize the negative impact in both the near and far term of the development, and to serve as input into the Environmental Impact Report being prepared for the development.

The general methodology applied to this study is as follows:

- Inventory existing traffic conditions.
- Estimate future traffic due to anticipated traffic growth and other potential developments in the general vicinity.
- Estimate magnitude and geographic orientation of traffic generated by Marin Mall.
- Superimpose the Marin Mall traffic onto both the existing traffic conditions and onto the projected future conditions.
- Analyze resulting traffic conditions.
- Recommend facility improvements as necessary.

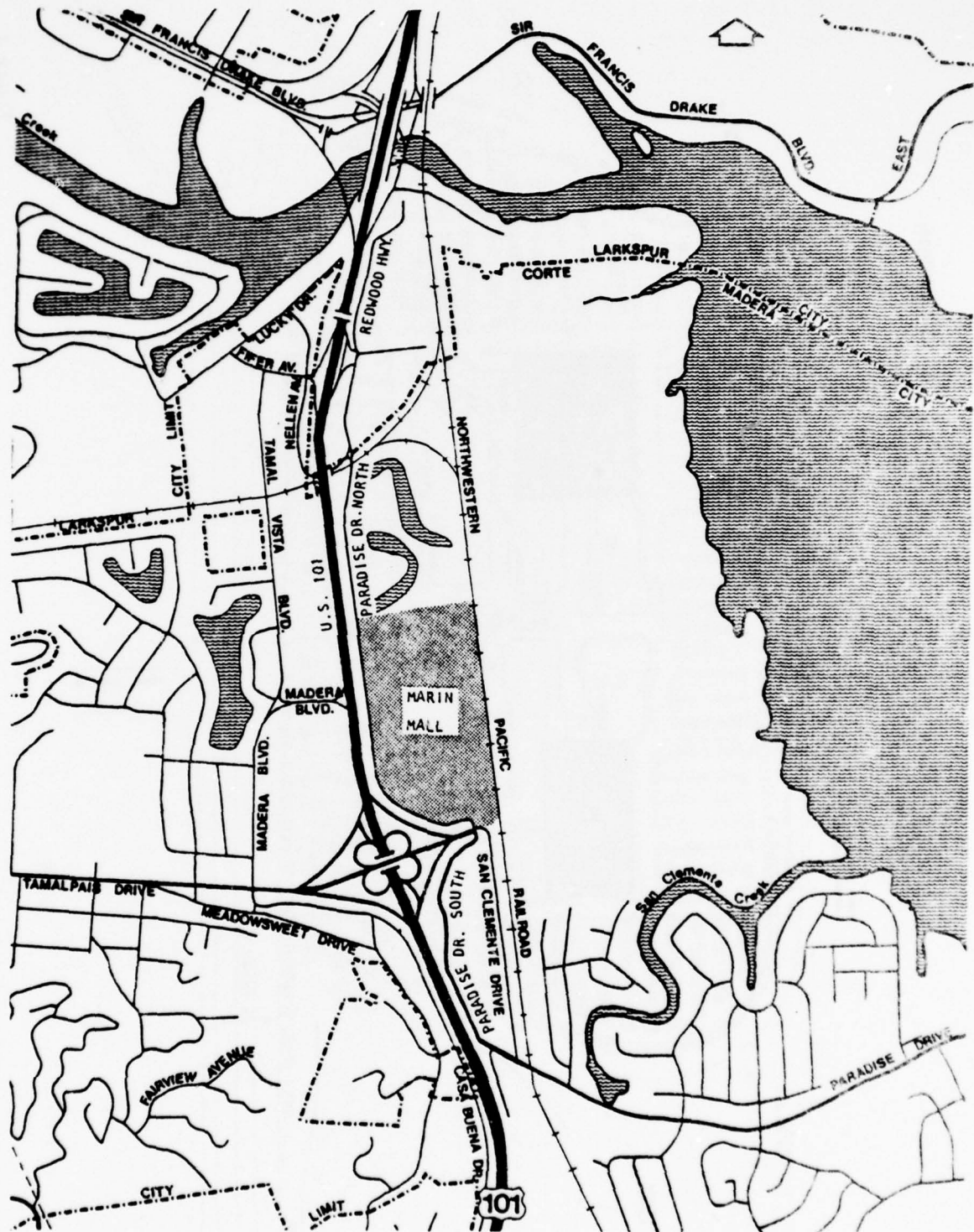
SITE DESCRIPTION

Marin Mall is a planned development project for regional shopping use comprising some 50.27 acres of land within the Town of Corte Madera. The area is presently undeveloped open space. The site location is shown in Figure 1. The proposed center is to be located east of U. S. Highway 101, north of Tamalpais Drive, and west of the Northwestern Pacific Railroad right-of-way. Two major department stores, as well as numerous smaller retail outlets located in eight mall shop clusters are planned for the center. Altogether, some 670,000 square feet of gross leasable floor area are provided for in the plans. All auto parking for the shopping complex, approximately 3,440 spaces, is to be provided on site at grade. Figure 2 presents the presently proposed site plan.

STREET AND HIGHWAY NETWORK

This section gives a description of each of the important streets and highways that would serve to varying degrees as access roads to the Marin Mall development.

United States Highway 101 is the major north-south vehicular and transit route in Marin County and lies just to the west of the proposed development. U. S. 101 is built to freeway standards from the Golden Gate Bridge to a point north of the site which is just above Novato. Through Corte Madera U. S. 101 has been widened to four travel lanes in each direction, two of which are used exclusively as bus lanes from the south to a point between the Tamalpais Drive and Industrial Way Interchanges. The fourth southbound lane is exclusively for buses between 6 AM and 9 AM and the fourth northbound lane is reserved between 4 PM and 7 PM. This section of U. S. 101 experiences directional congestion during morning and evening commuter rush hours. During the morning peak period (6:45 AM - 8:15 AM) southbound traffic backs up from the Tiburon Interchange to Corte Madera. Slower travel time and stop and go conditions



↑ NORTH

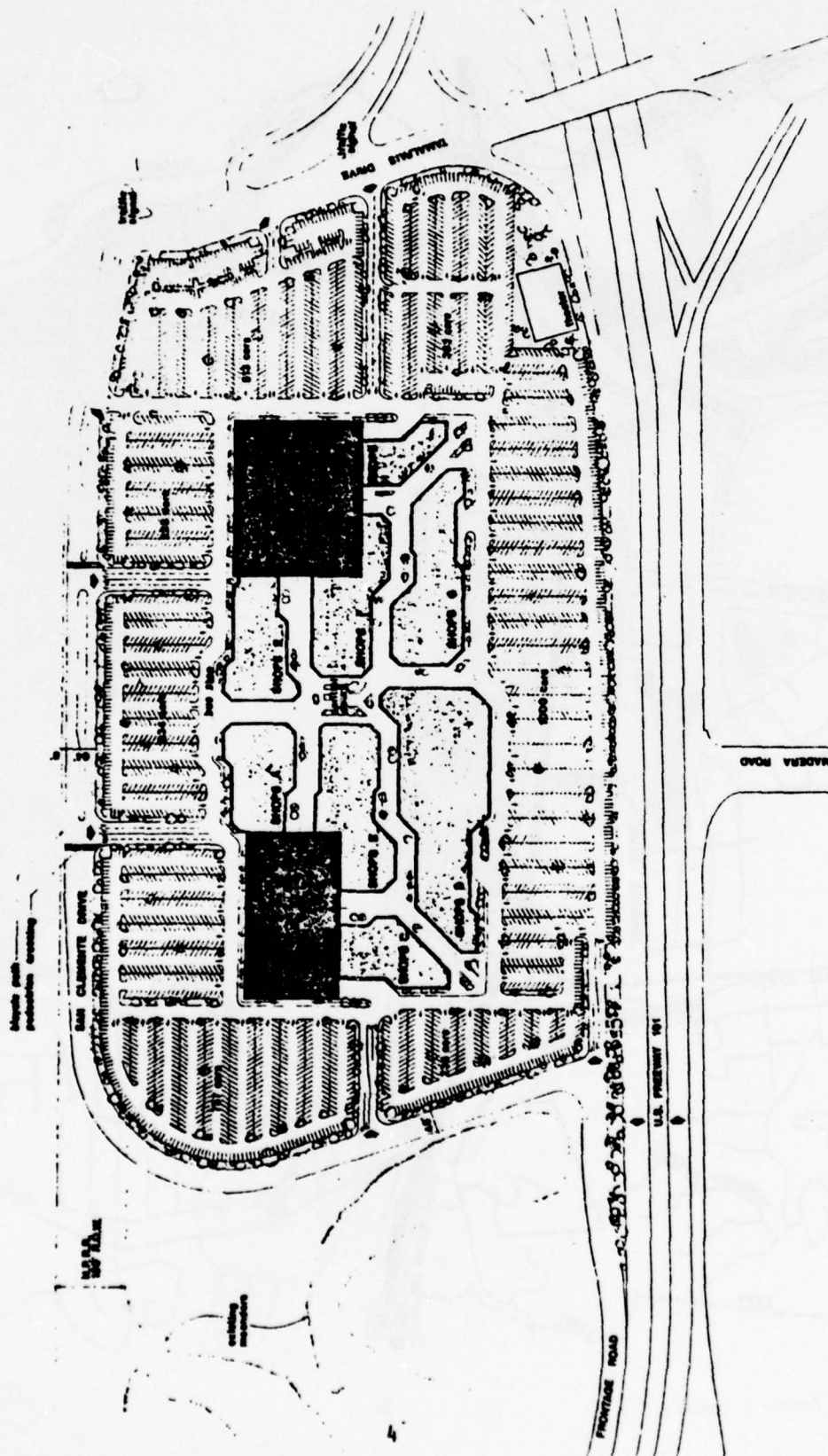


Figure 2
SITE PLAN
Marin Mall

Source: ke, Nicolais, Archuleta

are often evident during the evening peak period in the northbound direction. Traffic volumes are highly directional during these periods with about 60 percent of the travel in the peak direction. Congestion during all peak periods results in diversions to paralleling streets and alternative east-west freeway access streets. Those impacted in this manner include Magnolia Avenue, Doherty Drive, Tamal Vista Boulevard, Tamalpais Drive and Corte Madera Avenue. The traffic generally comes from the communities of Greenbrae, Kentfield, Ross, San Anselmo, Fairfax and San Rafael which would probably, under good freeway operation, use Sir Francis Drake Boulevard and Second Street for freeway access.

There are four Interchanges located along U. S. 101 in the general vicinity of the site. The Tamalpais Drive Interchange is a full cloverleaf without collector distributor roads, the Madera Boulevard Interchange is a partial Interchange southbound on-and-off ramps only, the Fifer Avenue/Industrial Way Interchange has north and southbound on-and-off ramps to frontage roads, and the Sir Francis Drake Boulevard is a directional diamond interchange (called the Greenbrae Interchange). These Interchanges are grouped close together along a distance of only 1.5 miles which results in weaving conflicts along the freeway. The short weaving section northbound between the Industrial Way on-ramp and the Sir Francis Drake Boulevard off-ramp was recently coned by Caltrans so that traffic entering from Industrial Way must exit at Sir Francis Drake and re-enter the freeway by using the Sir Francis Drake on-ramp. This specialized treatment has improved freeway operation through this section but has increased congestion at the ramp intersection with Sir Francis Drake. The southbound Madera Boulevard on-ramp is located only 550 feet from the southbound Tamalpais Drive off-ramp which causes weaving conflicts. The Tamalpais Drive full cloverleaf design is considered by Caltrans to contribute to serious weaving conflicts in both directions and cause localized congestion through and upstream of the interchange. However, the primary cause of northbound PM congestion appears to be due to the fact that the northbound approach to this interchange has five travel

lanes, the inside lane is for buses only during the evening peaks and the right hand lane is an exit only to eastbound Paradise Drive. This results in only three through lanes being available for non-bus vehicles through the interchange. Many northbound vehicles stay in the far right lane (lane 1) until it becomes the exit only lane and then stop and wait for a gap in traffic in the adjacent lane (lane 2). This stoppage blocks all other traffic in lane 1 attempting to exit the freeway. The friction created by the lane changes results in stoppage of the adjacent freeway lanes.

Figure 3 shows representative 24-hour and evening peak hour traffic volumes by direction for U. S. 101 as well as other important streets in the vicinity of the study site. The hour selected for the area-wide traffic peak condition was 5 PM - 6 PM.

Paradise Drive for clarity in this report will be broken into three segments. The portion between Nellen Avenue and Tamalpais Drive will be called Paradise Drive North, the portion between Tamalpais Drive and the south intersection with San Clemente Drive will be called Paradise Drive South and the portion south of that will be called Paradise Drive.

Paradise Drive North is a north-south two lane frontage road that lies east of the freeway. It passes along the proposed site for the Marin Mall.

Paradise Drive South is also a north-south two lane frontage road that serves many adjacent commercial developments.

Paradise Drive is a four lane arterial from San Clemente Drive to Prince Royal Drive where it again becomes a two lane road. Paradise Drive to the south connects to Tiburon and Belvedere.

DE LEUW, CATHAR & COMPANY

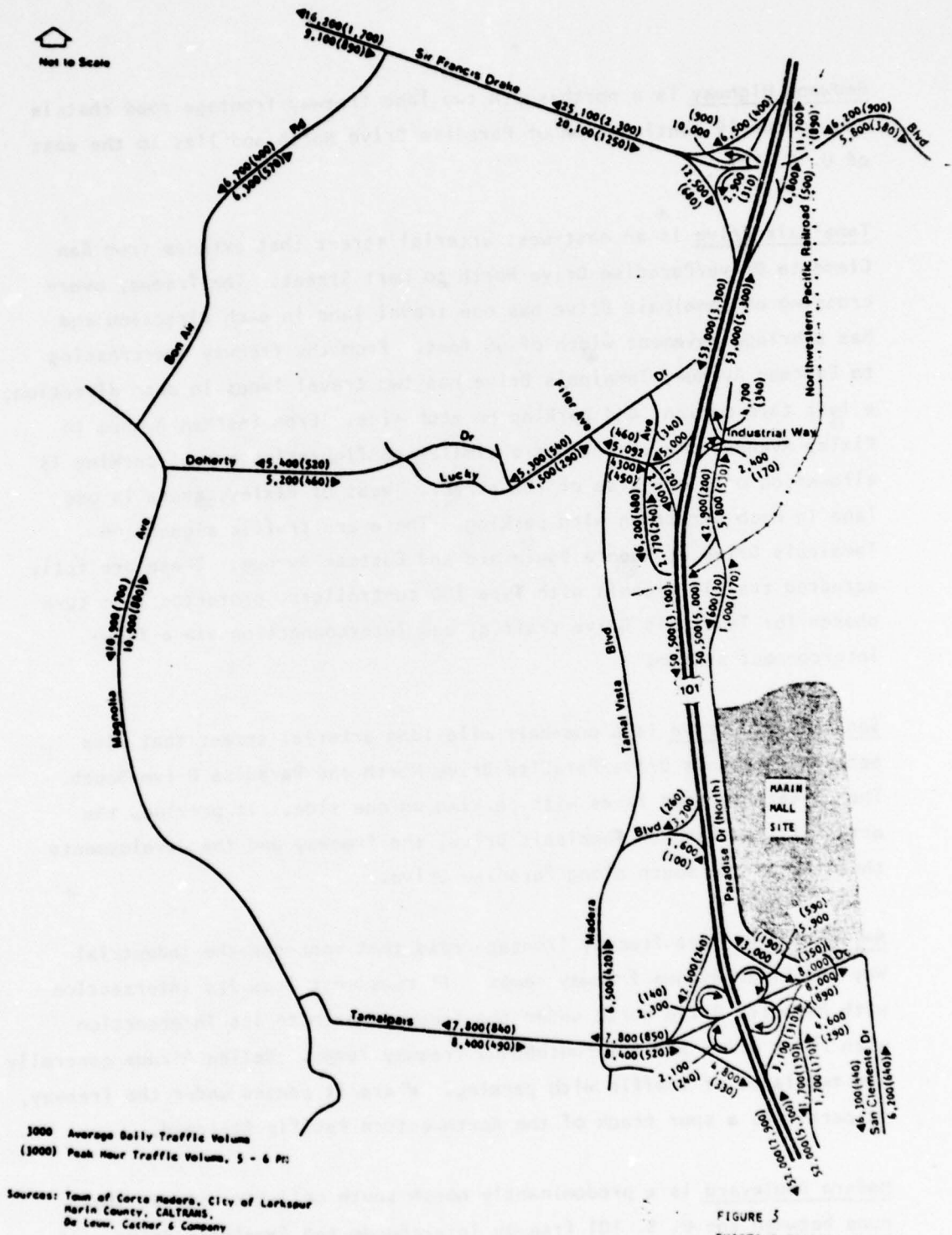


FIGURE 3
EXISTING TRAFFIC VOLUMES, 1976

Redwood Highway is a north-south two lane freeway frontage road that is the northerly continuation of Paradise Drive North and lies to the east of U. S. 101.

Tamalpais Drive is an east-west arterial street that extends from San Clemente Drive/Paradise Drive North to Hart Street. The freeway overcrossing on Tamalpais Drive has one travel lane in each direction and has a bridge pavement width of 56 feet. From the freeway overcrossing to Eastman Avenue, Tamalpais Drive has two travel lanes in each direction, a left turn median, and parking on each side. From Eastman Avenue to Pixley Avenue, the street has a similar configuration except parking is allowed on only one side of the street. West of Pixley, there is one lane in each direction with parking. There are traffic signals on Tamalpais Drive at Madera Boulevard and Eastman Avenue. These are fully actuated traffic signals with Type 100 controllers, protected left turn phases for Tamalpais Drive traffic, and interconnection via a flow-interconnect system.

San Clemente Drive is a one-half mile long arterial street that lies between Tamalpais Drive/Paradise Drive North and Paradise Drive South. The street has four lanes with parking on one side. It provides the arterial link between Tamalpais Drive, the freeway and the developments that lie to the south along Paradise Drive.

Nellen Avenue is a freeway frontage road that connects the Industrial Way and Fifer Avenue freeway ramps. It runs west from its intersection with Paradise Drive North under the freeway north to its intersection with Fifer Drive and the southbound freeway ramps. Nellen Avenue generally has two lanes of traffic with parking. Where it passes under the freeway, it parallels a spur track of the Northwestern Pacific Railroad.

Madera Boulevard is a predominantly north-south collector street that runs between the U. S. 101 freeway interchange and Tamalpais Drive. It

has four lanes and a raised median except between Mohawk Avenue and Tamalpais Drive where there is a third southbound lane.

Tamal Vista Boulevard is a collector street from Madera Boulevard to Fifer Drive. It has two travel lanes and parking, but is striped for two northbound approach lanes at Fifer Drive where it is STOP sign controlled.

Sir Francis Drake Boulevard is a major arterial that extends between the Richmond-San Rafael Bridge and the Ross Valley residential area and has an interchange with U. S. 101, called the Greenbrae interchange. East of the Greenbrae interchange with U. S. 101 Sir Francis Drake has two travel lanes with no parking on either side up to the Larkspur City limits. East of the City limits, the County has recently improved it to a two lane roadway, with shoulder striping and a paved shoulder area. Just east of the Greenbrae interchange two lanes pass beneath a narrow Northwestern Pacific Railroad trestle. Through the interchange, Sir Francis Drake has two lanes and a left turn lane for the eastbound to northbound on-ramp movement. All movements to and from the freeway ramps are grade separated, except all movements to the northbound on-ramp, and the southbound off-ramp to eastbound left turn movement on to Sir Francis Drake. Presently, Sir Francis Drake is STOP sign controlled at its intersection with the northbound on- and off-ramps. This intersection presently experiences congestion during the evening peak period, with a large queue evident in the westbound direction. West of the freeway, Sir Francis Drake has four lanes, and a raised median with left turn median lanes at key intersections.

Doherty Drive is a two lane east-west collector road that runs between Magnolia Avenue and Riviera Circle. In conjunction with Lucky Drive and Fifer Avenue, it provides access to the freeway.

Bon Air Road is a collector road that extends between Sir Francis Drake Boulevard and Magnolia Avenue. Bon Air generally has two lanes, but widens to four lanes at either end.

Lucky Drive is a two lane road that runs between Doherty Drive and Nellen Avenue. At its intersection with Fifer Avenue, there are two eastbound approach lanes, which are YIELD sign controlled. Lucky Drive along with Doherty Drive, Fifer Avenue and Nellen Avenue provides access to the freeway. However, this access route is indirect and various delays are encountered from the numerous STOP and YIELD controls and the required turns at each intersection.

Fifer Avenue is a short collector street that runs between Lucky Drive and Nellen Avenue, a distance of approximately 800 feet. It connects directly with the southbound U. S. 101 on- and off- ramps. The eastbound approach to the Nellen Avenue intersection has two approach lanes and is STOP sign controlled. The intersection with the freeway ramps is STOP sign controlled for all approaches except the freeway off-ramp. Some congestion is evident during peak periods on the approaches controlled by STOP signs.

Magnolia Avenue is an arterial street that runs between College Avenue and Corte Madera Avenue. It is the only north-south surface street through Corte Madera and Larkspur and provides connectivity between the Upper Ross Valley and Mill Valley. For this reason it is sometimes used as a freeway bypass. Between College Avenue and Bon Air Road it is developed to four lanes and south of Bon Air Road it is developed to two lanes.

PEDESTRIAN FACILITIES

Existing pedestrian access to the vicinity of the Marin Mall site is primarily confined to one sidewalk that is provided along Tamalpais Drive across U.S. 101. This sidewalk, which is generally five feet wide, starts out on the north side of Tamalpais Drive in the vicinity of the Corte Madera Shopping Center. From there the sidewalk continues along the north side of Tamalpais Drive crossing the southbound U.S. 101

off-ramp at grade and continues adjacent to the embankment of the Tamalpais Drive approach to the overcrossing structure to the bike and pedestrian spiral ramp structure located on the south side of Tamalpais Drive. From that vicinity a branch of the sidewalk goes north underneath the Tamalpais Drive overcrossing to the U. S. 101 southbound bus stop pad. The primary branch of the pedestrian way ascends to Tamalpais Drive via the spiral ramp and then continues on the bridge structure on the south side of Tamalpais Drive across the freeway to another spiral ramp. From there the sidewalk descends the spiral ramp. The primary sidewalk crosses underneath the northbound loop on-ramp to U. S. 101 and continues east across the northbound U. S. 101 off-ramp at grade, terminating at the intersection of Paradise Drive North and South and San Clemente Drive. A branch of the sidewalk goes south from the east spiral ramp, crosses the northbound loop on-ramp at grade and continues to the U. S. 101 northbound bus stop pad. From the bus pad a second sidewalk connects to Paradise Drive. This small section of sidewalk serves some park-and-ride patrons. This entire pedestrian route system is generally separated from moving traffic and minimizes pedestrian/auto conflicts. It's major problems are that the route is very complex, not signed, not readily visible to the average pedestrian, not illuminated at night, dark even during the day under the overcrossing structure, and has potential for serious bike/pedestrian accidents on the steep spiral ramps. Also, there are graveled areas in the general interchange area that are used as drainage swales that lead to nowhere, and are easily confused for pedestrian paths.

BICYCLE FACILITIES

There are no bicycle routes on Tamalpais Drive at its interchange with U. S. 101. Bicyclists must either walk or ride the existing narrow sidewalk facility across the interchange or they must share the roadway

with automobiles. This sharing presents problems for the bicyclists partly because of the lack of on-street bicycle lanes, but also because of the numerous conflict points between bicycles and automobiles at the ramp merge and diverge points which are due to the full cloverleaf interchange design.

TRANSIT FACILITIES

Existing transit stops at the Tamalpals Drive Interchange with U.S. 101 are confined to bus stops located on special bus stop pads in the middle of the cloverleaf interchange for both southbound and northbound freeway routes. In the southbound direction the buses get off the freeway at the southbound Tamalpals Drive off-ramp and enter the special bus stop pad. Transit patrons, who are not picked up by auto at the pad must walk across the southbound loop on-ramp and follow the circuitous route through the interchange to get to their destination. In the northbound direction, the bus stop pad is located between the northbound off-ramp and loop on-ramp. From that point pedestrians have a choice of either crossing the northbound loop on-ramp and continuing up the spiral ramps to get to the west side of the interchange or walking southeast by crossing the northbound off-ramp to get to Paradise Drive. The at grade crossings of the freeway ramps are potential danger points for pedestrians, however, due to the short distances that pedestrians must cross, only about 14 feet, and due to the relatively large gaps in traffic on these ramps, these crossings can be made safely. Sight-distances for these crossings are more than adequate.

CHAPTER II FUTURE CONDITIONS

In order to obtain a future year traffic basis by which to compare traffic generated by Marin Mall, 1985 traffic levels were developed for streets in the vicinity of the proposed center. It was assumed that the existing highway system would remain essentially unchanged, and that basic travel behavior in the area would remain the same. Improvements in the level of transit service were assumed.

The year 1985 was selected as the future year that traffic levels would be projected for and against which traffic from the Marin Mall would be evaluated. To evaluate the 1985 future year conditions a number of pending, proposed and potential developments in the study area were assumed to be existing by the target year. All of the considered developments are scheduled or could be theoretically completed by 1985. The following sections describe those developments, indicate their probable traffic generation, describe the 1985 traffic modeling procedure employed and present the projected 1985 traffic volumes.

1985 DEVELOPMENT LEVEL

The basic level of development of Marin County assumed for the analysis is in accordance with the Marin Countywide Plan for 1985, City and Town Plans of the Lower Ross Valley, and the development of various other identifiable future development proposals in the general vicinity of the Marin Mall. While certain of these developments may not be constructed within the proposed time frame, or ever, they were all considered so that the maximum development level and resulting traffic levels would be obtained and existing facilities be evaluated in light of them. The

following gives a description of each project proposal and is keyed to Figure 4 which shows the approximate location of each proposal.

At the Corte Madera Center a new drug store is to occupy the vacant Grant's store space and in addition 115,000 square feet of new retail development was assumed.

Escalle, located in the City of Larkspur, has a proposed plan that combines commercial, residential and library development. The commercial development includes a 10,000 square feet restaurant, 8,000 square feet of shops, and 12,000 square feet of office space. The library would have 12,000 square feet and the residential portion includes 169 condominium units.

The Larkspur Ferry Terminal is to be located on east Sir Francis Drake Boulevard in Larkspur and is presently under construction. It will provide direct commuter ferry service to San Francisco.

Madera del Presidio is a proposed housing development with 64 single-family and 217 condominium units located east of U.S. 101 and south of Paradise Drive.

Muzzi Property which is owned by the Golden Gate Bridge District was assumed as a 60 acre public park developed for intense recreational use.

The San Quentin Peninsula Development is located on east Sir Francis Drake Boulevard and consists of four basic elements: Larkspur landing, Remillard Brick Company Restaurant, Wood Island Office Complex, and Bay Front Park. The project is divided into two phases and the first is presently pending local approval. Upon completion of the entire project, there would be 1,229 apartment and condominium units, 270,000 square feet of office space, a lodge of 300 rooms, a service station, shops, restaurants, recreational facilities, and parks.

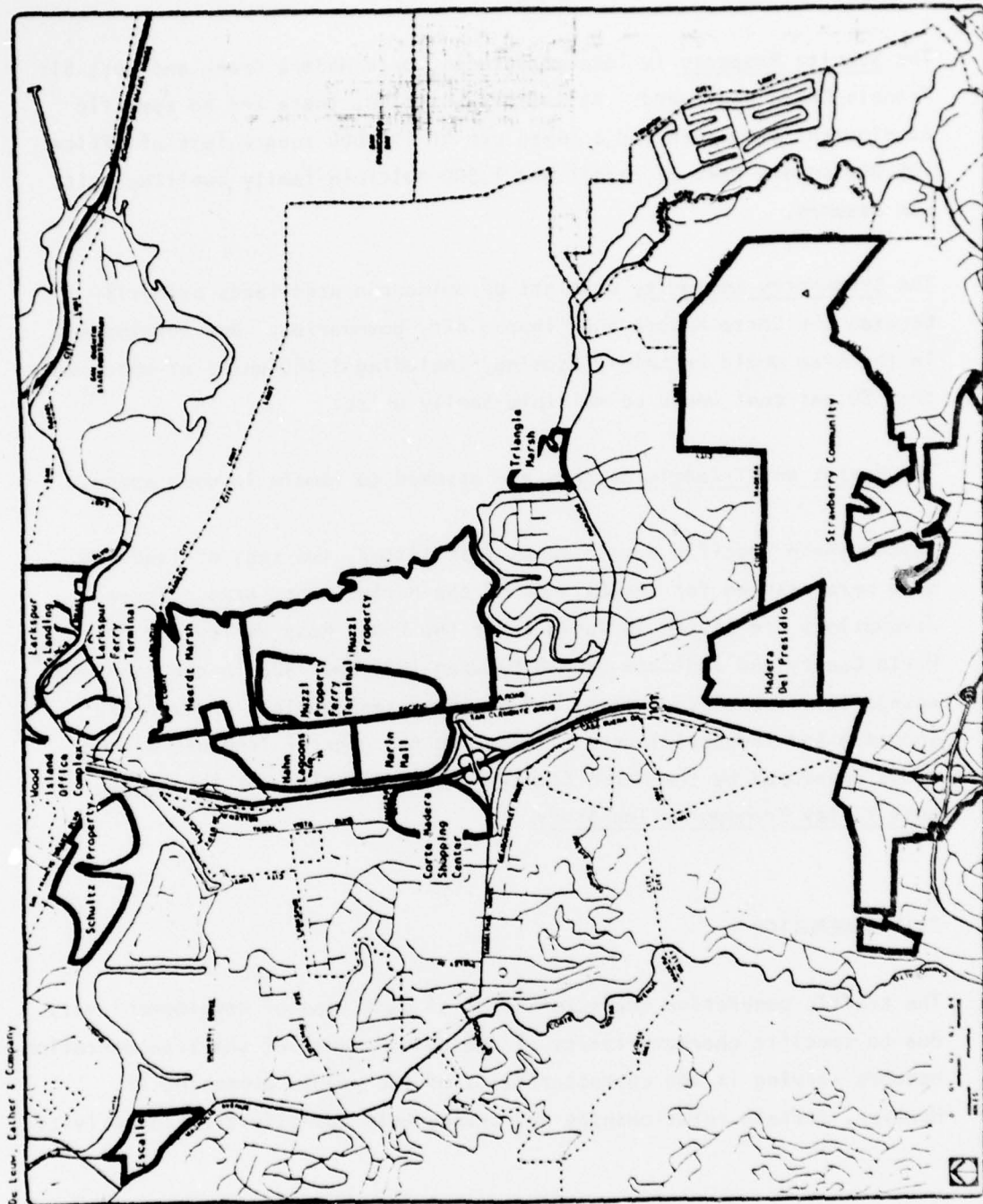


FIGURE 4
1985 DEVELOPMENT ASSUMPTIONS

Source: Livingston and Associates

The Schultz Property is located between Corte Madera Creek and west Sir Francis Drake Boulevard. At the present time, there are no specific development proposals and a mixed use of 145,000 square feet of office, 105,000 square feet of retail and 1,300 multiple-family dwelling units was assumed.

The Strawberry Community consists of unincorporated lands primarily between the Corte Madera and Tiburon city boundaries. New development in the area would be mainly housing, including 1,180 units of which more than 80 per cent would be multiple-family units.

The Heerdt and Triangle Marshes are assumed to remain in open space.

Beyond these specific developments just listed, two sets of land use data were assumed for the balance of the Marin County area. These assumptions are listed in Table 1 for the Lower Ross Valley and for Marin County and indicate growth between 1975 and 1985 in the land use categories of dwelling units, and acres of residential, commercial, shopping and industrial uses. These are the general land use assumptions developed by the Marin County Transit District for the Lower Ross Valley Transportation Study.

TRIP GENERATION

The traffic generation characteristics of each type of development vary due to specific characteristics of the development, of the transportation network serving it and characteristics of the people accessing it. However, certain relationships and trends help quantify traffic activity

Table 1
LOWER ROSS VALLEY AND MARIN COUNTY LAND USE ASSUMPTIONS 1975-1985

<u>Lower Ross Valley*</u>						
	<u>Population</u>	<u>Dwelling Units</u>	<u>Acres</u>			
			<u>Resid.</u>	<u>Comm.</u>	<u>Shop.</u>	<u>Indust.</u>
1975	28,441	10,934	2,892	4	177	302
1985	33,333	14,114	3,399	33	230	337
Growth	4,892	3,180	507	29	53	35
<u>Marin County**</u>						
	<u>Population</u>	<u>Dwelling Units</u>	<u>Acres</u>			
			<u>Resid.</u>	<u>Comm.</u>	<u>Shop.</u>	<u>Indust.</u>
1975	218,923	78,437	23,857	102	933	756
1985	255,239	98,815	28,399	269	1,285	1,018
Growth	36,316	20,378	4,542	167	352	262

*Developed by Marin County Transit District for the Lower Ross Valley Transportation Study based on existing land use and countywide and city plans for 1985. Revised by Transit District, April 6, 1976.

**Development by Marin County Transit District for the Lower Ross Valley Transportation Study based on the Marin Countywide Plan for 1985. Revised by Transit District, April 6, 1976.

for proposed developments. To provide input into the transportation model used to project future year travel, it was necessary to determine the total daily one-way trip ends generation of each of the developments described in the previous section. Trip generation for each development is shown in Table 2. For each different type of land use activity a representative daily trip ends rate was obtained based on recent studies.* These were applied to the areas of each development resulting in daily trip end totals.

1985 TRAVEL FORECAST

Travel levels on the highway network in the study area for the year 1985 were determined through exercise of the land use gravity computer model developed for Marin County by the County Transportation Planning staff. Inputs into the model consisted of total daily person trips for each traffic analysis zone. In general, to reflect the future development of the individual projects listed in the previous section, vehicle trip end generation and vehicle occupancy factors were applied to each trip type category and all categories were added for each development (traffic zone). Model inputs for 1985 were then adjusted where necessary to reflect the appropriate conditions. No development was assumed for the Marin Mall site. In special cases, such as the Larkspur Ferry Terminal, special calibrated values developed by the Marin County Transit District for daily trip generation were used. All other 1985 input data reflected

* These include:

Institute of Traffic Engineers, Traffic Engineering, March 1974.

State of California, Caltrans, Trip Ends Generation Research Counts, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1973, 1974, 1975.

W. A. Alroth, Parking and Traffic Characteristics of Suburban Industrial Development, Highway Research Record No. 237.

Institute of Traffic Engineers, Technical Notes, Fall 1975.

Table 2
TRIP GENERATION FOR PROPOSED DEVELOPMENTS

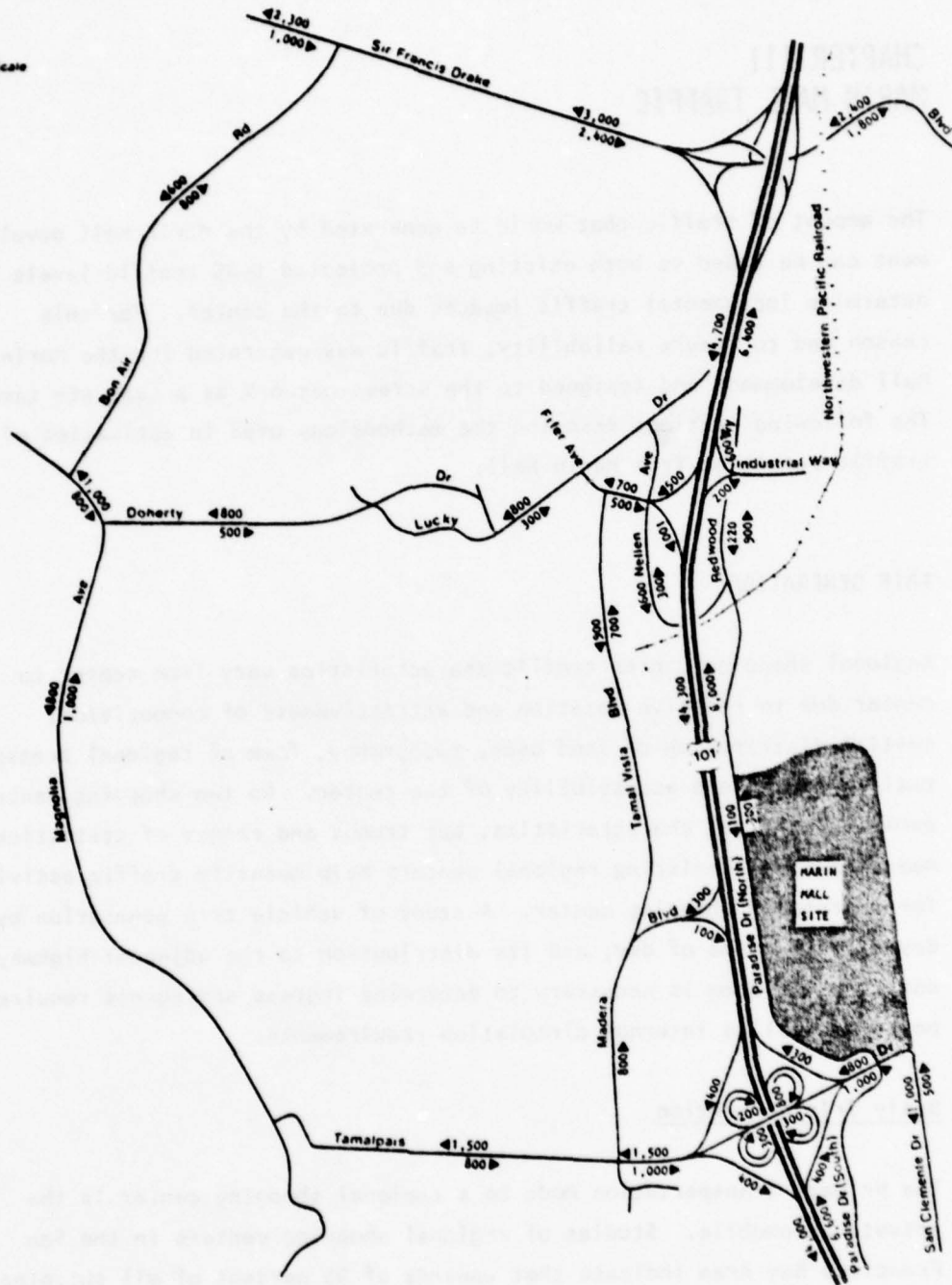
Development	Activity-Size	Daily Vehicle Trip End Generation Rate	Daily Vehicle Trip Ends
Corte Madera Center	Drug Store-23,000 ft ² Retail - 115,000 ft ²	100/1,000 ft ² 70/1,000 ft ²	2,300 8,050
Escalle	Restaurant-10,000 ft ² Retail - 8,000 ft ² Office - 12,000 ft ² Library - 12,000 ft ² Multiple Units - 169	44/1,000 ft ² 100/1,000 ft ² 10/1,000 ft ² 20/1,000 ft ² 7/unit	440 800 120 240 1,180
Larkspur Ferry Terminal	Ferry Service - 3,200 passengers	1.6/passenger	5,120
Madera del Presidio	Multiple Units - 217 Single Units - 64	7/units 10/units	1,520 640
Muzzi Property	Park - 60 Acres	- - -	500
San Quentin Development	Retail-164,000 ft ² Office-270,000 ft ² Multiple Units-1,384 Open Space - 18.2 acres Service Station Motel - 300 rooms Restaurant-14,000 ft ² Park - 13.3 acres	60/1,000 ft ² 10/1,000 ft ² 7/Unit - - - 400/station 10/occupied room 50/1,000 ft ² - - -	9,840 2,700 9,690 100 400 2,400 700 300
Schultz Property	Office-145,000 ft ² Retail-105,000 ft ² Multiple Units-1,300	10/1,000 ft ² 70/1,000 ft ² 7/Unit	1,450 7,350 9,100
Strawberry Community	Multiple Units-945 Single Units - 235	7/Unit 10/Unit	6,620 2,350
Heerdt Marsh	Open Space	- - -	- - -
Triangle Marsh	Open Space	- - -	- - -

Source: De Leuw, Cather & Company

expected land use and were the same assumptions used in the Lower Ross Valley Transportation Study.

The highway network for 1985 was assumed to be the same as existing and the transit network in the study area consisted of an expanded bus system with 43 local bus coaches and 173 transbay bus coaches. The model produces evening peak hour transit and automobile trips which were assigned to the existing networks. However, due to the inaccuracy endemic to large scale transportation modeling, manual adjustments and reassignment were necessary to produce reasonable future year projections. The adjusted 1985 traffic demand projections are shown in Figure 5. The evening peak hour these demand volumes represent is assumed to be the 5 PM to 6 PM period which corresponds to the existing peak hour. These projections are without development at the study site and are considered to be the "base" conditions in 1985. It should be noted that during this peak period, six percent of all trips to and from the general study area would be made by transit.

DE LEUW, CATHY & COMPANY



Source: De Leuw, Cathy & Company

FIGURE 5
1985 PEAK HOUR DEMAND, 5 - 6 PM
WITHOUT MARIN MALL

CHAPTER III

MARIN MALL TRAFFIC

The amount of traffic that would be generated by the Marin Mall development can be added to both existing and projected 1985 traffic levels to determine incremental traffic impacts due to the center. For this reason and to insure reliability, traffic was generated for the Marin Mall development and assigned to the street network as a separate task. The following sections describe the methodology used in estimation of traffic resulting from Marin Mall.

TRIP GENERATION

Regional shopping center traffic characteristics vary from center to center due to relative location and attractiveness of competition, spatial distribution of land uses, topography, form of regional transportation network and accessibility of the center. No two shopping centers exhibit identical characteristics, but trends and ranges of statistical measurements of existing regional centers help quantify traffic activity for a proposed shopping center. A study of vehicle trip generation by day of week, time of day, and its distribution to the adjacent highway and street system is necessary to determine ingress and egress requirements as well as internal circulation requirements.

Daily Trip Generation

The primary transportation mode to a regional shopping center is the private automobile. Studies of regional shopping centers in the San Francisco Bay Area indicate that upwards of 95 percent of all shopping trips are made by auto.

Analysis, that will be described later in this chapter, has indicated that with the 1985 transit network serving Marin Mall that approximately four percent of the peak hour trips to the Marin Mall center would be made by transit. This will be used as the modal split assumption. However, because of this relatively low projected transit ridership to the center, our analysis will concentrate on motor vehicle trips.

Studies* of major regional shopping centers indicate that daily vehicle trip rates vary from 36 to 56 trip ends per thousand gross square feet of floor area. In other words, these regional centers attract between 18 and 28 vehicles per 1,000 square feet of gross floor space on an average day. The widely reported average daily rate of 40 vehicle trip ends for weekdays was assumed for the proposed Marin Mall development. At an average auto occupancy of 1.3 persons per vehicle this represents 52 person trips per 1,000 square feet of floor area. Subtracting the previously indicated level of four percent transit ridership, the vehicle person trip generation rate becomes 50 and the transit rate is two. Therefore, the net vehicle trip generation rate because of transit patronage is reduced to 38.4 daily vehicle trips per thousand gross square feet of floor area. At these rates, the proposed shopping center, with 670,000 gross square feet of floor area, would generate approximately 26,000 vehicle trip ends and 1,300 transit person trip ends per average weekday. Similar analysis renders a daily vehicle trip end rate for a

* These include:

Highway Research Board, Urban Travel Patterns for Airports, Shopping Centers and Industrial Plants, 1966.

C.H. Harding, Shopping Centers: Planning and Design for Traffic and Traffic Generation, 1960.

State of California, Caltrans, Trip Ends Generation, Research Counts 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975.

Institute of Traffic Engineers, Technical Notes, Fall 1975.

Saturday of 45 per 1,000 gross square feet and a transit person trip end rate of 2.4 trips per 1,000 gross square feet. At these rates a typical Saturday would generate 30,000 vehicle trip ends and 1,600 transit trip ends.

Daily and Hourly Variation

Total travel to shopping centers varies by day of week due to the variability of evening openings, weekend effects and other factors affecting the regularity of shoppers' daily trip-making. A summary of daily variation typical of regional shopping centers is shown in the following table.

Table 3
PERCENT OF AVERAGE DAILY TRIP GENERATION

<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>
98	74	98	110	117	120

As is typical for centers of this type, highest traffic volumes are recorded on Fridays and Saturdays. Lowest volumes are generally observed on Tuesdays.

In addition to daily variation in shopping trips, fluctuation in shopping center travel by time of day is significant since transportation facility design criteria are predominantly based upon considerations of average daily peak period travel demand. Examination of typical daily and hourly traffic variation data indicates three periods critical to evaluation of traffic impacts. These periods are:

- Weekday between 12 noon and 1 PM. This is the peak weekday period for trips to and from a regional shopping center, with approximately 12 percent of total daily vehicular entries and exits occurring. This period is significant because it coincides with normal noontime peaking of other traffic on the adjacent streets.
- Weekdays between 5 PM and 6 PM. In this period some 8.5* percent of the daily vehicular entries to, and 8.5 percent of the exits from, the center occur. Although traffic to and from the center is lower than at noontime, this period is critical since it coincides with the PM peak period on the adjacent streets. Using these rates renders a peak hour generation of 1,100 inbound and 1,100 outbound vehicle trips.
- Saturday between 3 PM and 4 PM. In this period, approximately 11 percent of the Saturday entries and 11 percent of the exits take place. Although the shopping center traffic volumes are greatest during Saturday peaks, projections of Saturday traffic volumes are primarily important for determining internal shopping center requirements. Low Saturday volumes of non-shopping oriented trips on adjacent streets makes impacts of Saturday peak shopping travel on roadways external to the center less critical than weekday peaks.

Trip Distribution

Shopping trips generated by the proposed center were distributed based on an additional run of the Marin County land-use gravity transportation model with Marin Mall included as an existing development. Traffic analysis zones were aggregated into districts and trip tables were generated for the PM peak hour that indicated by direction the origins

*Typical values range from 7.0 to 9.6 and 8.5 was selected as being typical of a well utilized center.

and destination of each peak hour person trip to the Marin Mall Center. These distributions were broken down into percentages and are shown by general directional category in Table 4. The model also indicated that four percent of the peak hour travel to and from the center would be made by transit. Two new transit routes were assumed to directly serve the Marin Mall development in 1985. The first, called Route 19, operates on Paradise Drive from approximately Taylor Road north through the Marin Mall Center and east along Nellen, Fifer, Lucky, Doherty, Magnolia, and College Avenue to Sir Francis Drake. This line would operate in both directions on 20 minute headways. The second route (Route 21) has a termination point at the Marin Mall Center. From the center it follows Paradise Drive North and the freeway to the Larkspur Ferry Terminal. From the Ferry Terminal it travels along Sir Francis Drake to its intersection with Red Hill Avenue. Route 21 is also assumed to operate on 20 minute headways.

Trip Assignment

Shopping Center Circulation

It was recognized early that the optimum traffic circulation pattern for the Marin Mall Shopping Center would include access from both the north and south of the Center in order to minimize impact on Tamalpais Drive and its interchange with U. S. 101. The concept that has been developed includes the following features:

- An external perimeter road would be provided along the east and north sides of the Center. Access into the Center would be via these two roads and Tamalpais Drive.
- The existing Paradise Drive North would be relocated easterly from its present location along the freeway to a new location adjacent to the Northwestern Pacific right-of-way to serve as the east and north side perimeter road.

Table 4

PEAK HOUR TRIP DISTRIBUTION PERCENTAGES
Marin Mall

<u>Direction</u>	<u>Primary Route(s)</u>	<u>Inbound Vehicle Trips</u>	<u>Outbound Vehicle Trips</u>
<u>North</u>	U. S. 101	28%	28%
<u>East</u>	Sir Francis Drake Blvd.	6%	6%
	Paradise Drive/ San Clemente	8%	8%
<u>West</u>	Tamalpais Drive and Doherty Drive	20%	17%
	Sir Francis Drake Blvd.	6%	10%
<u>South</u>	U. S. 101	32%	31%
<u>TOTAL</u>		100%	100%

Source: De Leuw, Cather & Company

- Circulation within the Center would not occur on adjacent public streets by providing for complete internal circulation roads all around the Center buildings.
- Access from Tamalpais Drive would be restricted to selected movements to minimize traffic conflicts on this key roadway.

Assignment of Generated Traffic to Street Network

On the basis of the trip distribution and the level of weekday PM peak hour traffic generated by the center, traffic was manually assigned to the street network in the study area. This period was selected for later detailed analysis because it is the critical period for the adjacent roadway system. Certain assumptions were made as to how various trips would access points to the north of the site. These general guidelines were:

- Two-thirds of the center-related trips going to and coming from Sir Francis Drake Boulevard would utilize the Fifer Drive/Industrial Way interchange with U. S. 101. This is due to the shorter travel distance and protected, mandatory exit from the northbound Industrial Way on-ramp to Sir Francis Drake Boulevard. The other one-third were assumed to use the Tamalpais Drive interchange.
- Two-thirds of outbound Center related traffic with destinations on U. S. 101 north of Sir Francis Drake Boulevard were assumed to use the Tamalpais Drive interchange. The other one-third would use the Industrial Way on-ramp which is forced to exit and re-enter the freeway at Sir Francis Drake Boulevard. This change in emphasis is due to the awkward movement through the Sir Francis Drake Boulevard intersection. Some traffic, however, is assumed to use the Industrial Way ramp because of the shorter distance.

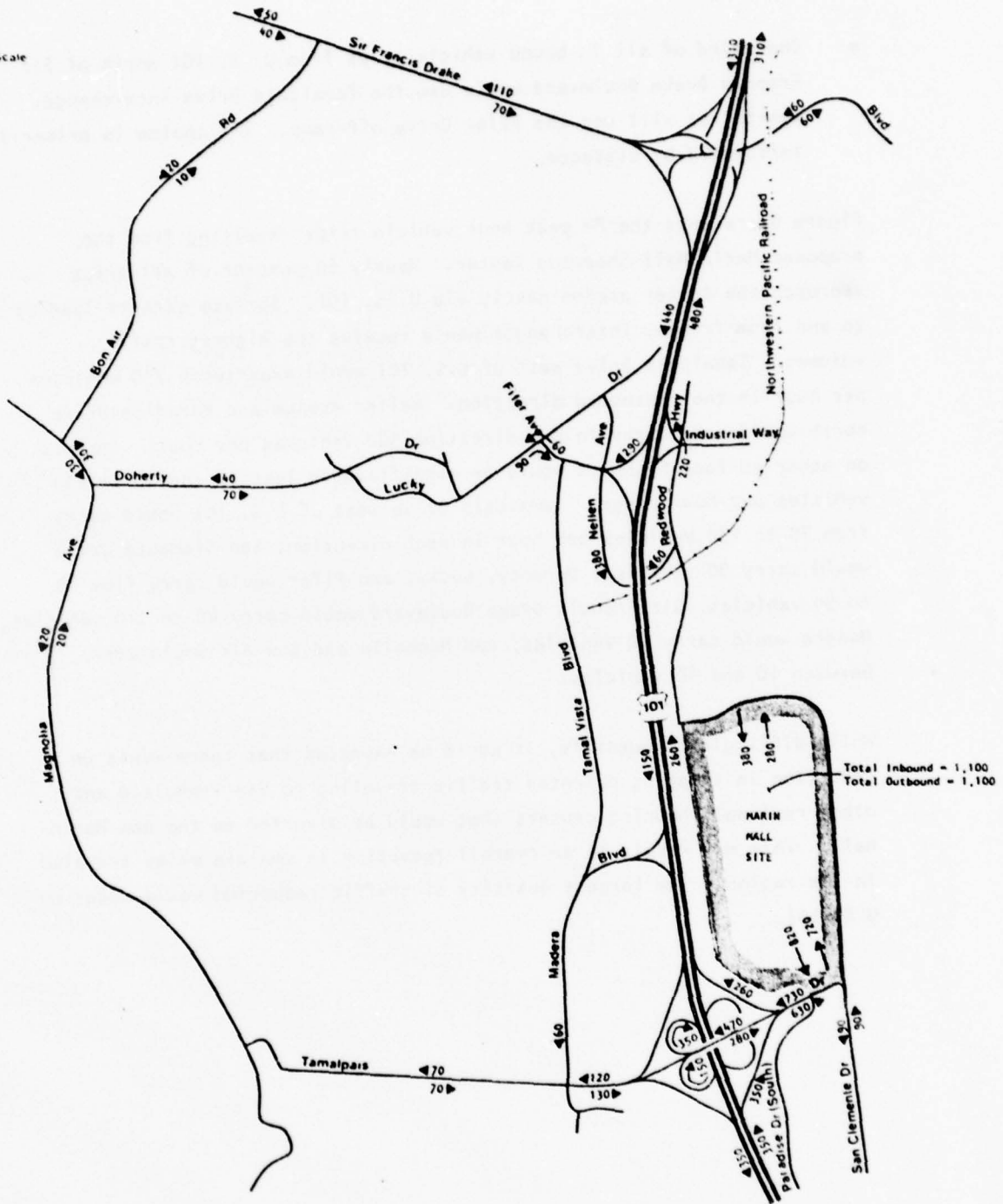
- One-third of all in bound vehicle trips from U. S. 101 north of Sir Francis Drake Boulevard would use the Tamalpais Drive Interchange. Two-thirds will use the Fifer Drive off-ramp. The choice is primarily influenced by distance.

Figure 6 presents the PM peak hour vehicle trips resulting from the proposed Marin Mall Shopping Center. Nearly 60 percent of all trips approach the Center predominately via U. S. 101. Surface streets leading to and from freeway interchanges would receive the highest traffic volumes. Tamalpais Drive east of U.S. 101 would experience 730 vehicles per hour in the eastbound direction. Nellen Avenue and Paradise Drive north would each carry in one direction 380 vehicles per hour. Impacts on other surface highways would be significantly less in the 10 to 130 vehicles per hour range. Tamalpais Drive west of U.S. 101 would carry from 70 to 130 vehicles per hour in each direction; San Clemente Drive would carry 90 vehicles; Doherty, Lucky, and Fifer would carry from 40 to 90 vehicles; Sir Francis Drake Boulevard would carry 40 to 110 vehicles, Madera would carry 60 vehicles; and Magnolia and Bon Air would carry between 10 and 40 vehicles.

While difficult to quantify, it could be expected that there would be a reduction in shopping oriented traffic traveling to San Francisco and other regional shopping centers that would be diverted to the new Marin Mall. This may result in an overall reduction in vehicle miles traveled in the region. The largest quantity of traffic reduction would occur on U.S. 101.



Not to Scale



Note: All traffic volume values have been rounded off to nearest 10 vehicles

Source: De Leuw, Cathy & Company

FIGURE 6

MARIN MALL PEAK HOUR TRAFFIC VOLUMES, 5 - 6 PM WEEKDAYS

CHAPTER IV

ANALYSIS OF TRAFFIC IMPACT

This chapter consists of an analysis of the incremental impacts on the local highway system that development of the Marin Mall would have. General highway level of service impacts will be assessed for all local highway and freeway segments, while more detailed capacity analysis will be performed for key locations. Alternative treatments will be evaluated where capacity or circulation deficiencies are encountered.

HIGHWAYS

Traffic flows are useful in attaining an understanding of the general nature of traffic in an area but by themselves do not indicate the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this the concept of "level of service" has been developed to correlate numerical traffic volume data to average travel speeds and subjective descriptions of traffic performance. Table 5 presents the level of service categories (C through F) considered in this analysis of highways and indicates the corresponding traffic volume ranges, average travel speed conditions, and qualitative definition of each category. The typical vehicle volume ranges shown in the tables were developed by Marin County for the Marin County Balanced Transportation Plan and were based on Caltrans capacity analysis techniques and calibration of land use planning models and were adjusted to reflect specific characteristics endemic to Marin County

Table 5

LEVEL OF HIGHWAY SERVICE INTERPRETATION

<u>Level of Service</u>	<u>Description *</u>	<u>Typical Vehicle Range ** Vehicles per Lane</u>
C	Good operation; occasionally vehicles may have to wait through more than one red traffic signal indication, and back-ups may develop behind turning vehicles; speeds on street segments greater than 20 mph.	Less than 700
D	Fair operation; vehicles may be required to wait through more than one red signal indication during short peaks within peak periods; no long-standing queues at signalized intersections; speeds on street segments greater than 15 mph.	700 - 1,000
E	Poor operation; some long-standing queues on critical approaches to signalized intersections; delays may be great--up to several red traffic signal indications; speeds on street segments about 15 mph.	1,000 - 1,200
F	Forced flow; represents jammed conditions where back-ups from down-stream traffic signals restrict or prevent movement of vehicles at up-stream intersections and, therefore, volumes carried are unpredictable; utilization of the approaches to intersection is prevented by outside conditions; speed on street segments less than 15 mph; delay will consist of at least several red traffic signal indications.	Greater or less than 1,200

* Based on National Academy of Sciences, Highway Capacity Manual, 1965.

** Developed by Marin County for the Marin County Balanced Transportation Plan.

street and freeway travel. The Marin Countywide Plan in conformance to generally accepted traffic planning standards recommends level of service "D" as the standard for the design of roadways. Therefore, level of service "D" will be considered the minimum acceptable operating condition for highways in the evaluation of this study.

Table 6 presents the PM peak hour level of service operation of each of the important local highways in the study areas under various existing and future traffic volume, and local development options. The first column indicates the existing levels of service, the second the levels of service that result from adding the projected future Marin Mall traffic to existing, the third column indicates the levels of service for projected 1985 traffic, and the fourth indicates the levels of service for projected 1985 traffic added to future Marin Mall traffic. These were all determined based on existing roadway geometrics.

The following discusses each of the important local roadways in terms of the level of service effects on each due to the Marin Mall Shopping Center.

Sir Francis Drake Boulevard east of U.S. Highway 101 is presently operating at level of service "D" and it would remain at this level upon immediate implementation of the Marin Mall development. In 1985, east Sir Francis Drake Boulevard would operate at level of service "F" with or without Marin Mall traffic due to the large traffic generation expected from the Larkspur Ferry Terminal and the San Quentin Peninsula Development. Presently, due to the expected traffic pressures of the soon to be completed Ferry Terminal, Caltrans and the City of Larkspur are planning to widen east Sir Francis Drake in the vicinity of the Greenbrae Interchange from two to four lanes and install traffic signal control at the northbound on- and off-ramps and southbound off-ramp. Even with this improvement, the east portion Sir Francis Drake in 1985 would operate at the "F" level of service with and without the Marin Mall development.

Table 6
PM PEAK HOUR LEVELS OF HIGHWAY SERVICE
Existing and 1985 Traffic Volumes
Existing Roadway Network

<u>Highway</u>	<u>Existing</u>	<u>Existing + Marin Mall</u>	<u>1985</u>	<u>1985 + Marin Mall</u>
Sir Francis Drake Blvd. w/o U.S.101	E	F	F	F
Sir Francis Drake Blvd. e/o U.S.101	D	D	F	F
Bon Air Drive	C	C	D	D
Doherty Drive	C	C	D	D
Lucky Drive	C	C	D	D
Fifer Avenue	C	C	D	D
Nellen Avenue	C	D	C	D-E
Madera Blvd.	C	C	D	D
Tamalpais Drive w/o U.S.101	C	C	D	D
Tamalpais Drive e/o U.S.101	D	F	E-F	F
Magnolia Ave. s/o Doherty	D	D	D-E	D-E
San Clemente Dr.	C	C	C	C
Paradise Drive South	C	C	C	C
Paradise Drive North	C	C	C	C
Redwood Highway	C	C-D	D	E

Source: De Leuw, Cather & Company

Sir Francis Drake Boulevard west of U.S. Highway 101 is presently operating at level of service "E" which would go to "F" upon inauguration of the Marin Mall center. In 1985, the level of service would be "F" with or without Marin Mall development. Six lanes would be required to improve the 1985 level of service with or without Marin Mall from "F" to "D-E". This six lane section would be required to approximately Wolfe Grade. The Lower Ross Valley Study indicated that an increase in the 1985 local bus system by a factor of four from a level of 43 buses would be required to avoid widening west Sir Francis Drake to maintain existing level of service conditions.

If Sir Francis Drake Boulevard is not widened or significant shifts to transit realized then some diversions to other routes of Marin Mall traffic in 1985 would probably take place. The magnitude of such a diversion is difficult to quantify but would come from those peak direction trips (westbound) that are projected to be generated by Marin Mall. This trip total is estimated to be 110 peak hour trips and this level can be taken as the maximum potential diversion. The actual diversion could be expected to be somewhat less and would probably vary each day depending on local traffic conditions and the characteristics of each individual driver. Local streets that could be impacted by diverted Marin Mall traffic from Sir Francis Drake Boulevard include Tamalpais Drive, Magnolia Avenue, Doherty Drive, Lucky Drive, Elfer Avenue, Nellen Avenue, and Bon Air Drive.

Bon Air Drive is not significantly effected by Marin Mall traffic over either existing or 1985 traffic levels. The existing level of service is "C" and would be maintained upon implementation of Marin Mall and the 1985 level of service of "D" would also remain the same with or without Marin Mall. The significant impacts on Bon Air Drive are due to the assumed 1985 growth, rather than Marin Mall.

Doherty Drive, Lucky Drive and Elfer Avenue together form a through east-west route and are presently operating at level of service "C". They would remain at "C" after immediate completion of Marin Mall. During 1985, with or without Marin Mall these streets would, according to the defined capacity guidelines, operate at level of service "D". However, because this route is indirect and has numerous STOP and YIELD controls and required turn moves at some intersections, actual operation would most likely be in the "D-E" category. The extension of William Avenue to Paradise Drive North which has been studied by Caltrans and proposed in other local studies such as the EIR for the Corte Madera Redevelopment Project, would provide relief for the Doherty Drive corridor. This proposal is shown in Figure 7. Development of William Avenue to four lanes would render a level of service of "C". However, this improvement does not appear to be solely warranted due to Marin Mall traffic, but rather because of local traffic growth from other sources such as the assumed Escalle development, expansion of the Corte Madera Center, and general dwelling unit increases as well as improved local circulation.

Nellen Avenue presently operates at level of service "C". With immediate development of Marin Mall it would deteriorate to level of service "D" at present and "D-E" in 1985. If Nellen were developed to provide three travel lanes, two southbound and one northbound over its length, and a signal were installed at its intersection with Paradise Drive North to replace existing STOP sign control it would operate at present and in 1985 at level of service "C" with the Marin Mall development. Alternatively the development of the proposed William Avenue extension would replace Nellen Avenue and would provide level of service "C" operation.

Madera Boulevard presently operates at level of service "C" and would operate at the same level upon immediate implementation of Marin Mall. In 1985, it is expected to operate at level of service "D" with or without Marin Mall development. Traffic service on this street is more significantly affected by the assumed improvements to the Corte Madera Center than by Marin Mall development.

De Leuw, Cather & Company

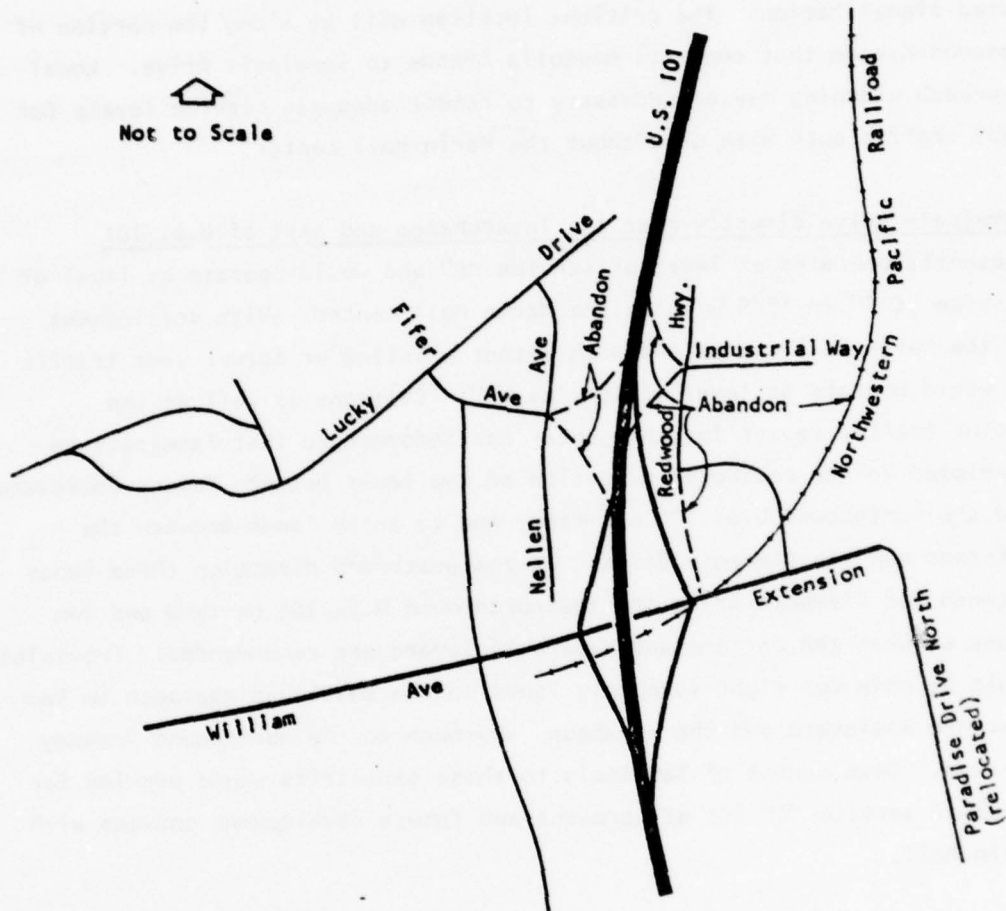


Figure 7
WILLIAM AVENUE AND FREEWAY INTERCHANGE IMPROVEMENTS

Tamalpais Drive/Redwood Avenue west of U.S. 101 operates at level of service "C" and would continue to upon near term implementation of Marin Mall. It would operate at level of service "D" in 1985 with or without development of Marin Mall due to its four lane cross section and sophisticated signalization. The critical location will be along the portion of Redwood Avenue that connects Magnolia Avenue to Tamalpais Drive. Local approach widening may be necessary to render adequate service levels for 1985 traffic both with or without the Marin Mall center.

Tamalpais Drive directly over the Interchange and east of U.S. 101 presently operates at level of service "D" and would operate at level of service "E-F" in 1985 without the Marin Mall center. With development of the Marin Mall center and with either existing or future year traffic it would operate at level of service "F". Caltrans as well as the recent traffic report for the center has recommended that Tamalpais be developed in the eastbound direction to two lanes between Madera Boulevard and the northbound U.S. 101 off-ramp, and to three lanes between the off-ramp and San Clemente Drive. In the westbound direction three lanes between San Clemente Drive and the northbound U.S. 101 on-ramp and two lanes between the on-ramp and Madera Boulevard are recommended. Provision would be made for right-turn only lanes on the eastbound approach to San Clemente Boulevard and the westbound approach to the northbound freeway on-ramp. Development of Tamalpais to these geometrics would provide for level of service "C" for all present and future development options with Marin Mall.

Magnolia Avenue between Bon Air Drive and Tamalpais Drive presently operates at level of service "D" and would remain at this level upon immediate implementation of the center. Similarly, in 1985 it would operate at "D-E" with or without Marin Mall. Marin Mall traffic accounts for only three percent of the projected traffic and has minimal impact on this critical two-lane section of Magnolia.

San Clemente Drive presently operates and would operate with the Marin Mall center now and in the future, at level of service "C". This is due to the high capacity of the existing four lane cross section.

Paradise Drive South would not be noticeably affected by Marin Mall. Development of Marin Mall and 1985 traffic volumes would not change its level of service from its present "C" rating. Paradise Drive South primarily serves as a commercial frontage road to San Clemente Drive and experiences relatively low volumes.

Paradise Drive North according to the site plan is proposed to be rerouted along the east edge of the center (where it would be called San Clemente Drive). Capacity analysis, which considers the special driveway access question into the center itself, indicates that with two lanes north of the site, and four lanes adjacent to the site, it would operate at level of service "C" with Marin Mall completed now or in 1985. This would provide a good level of service for both shopping center and non-center related traffic.

Redwood Highway, which connects to the Industrial Way freeway ramps, will be significantly impacted by Marin Mall. The existing level of service would be reduced from "C" to "C-D" at the present time and would be reduced from "D" to "E" by 1985 upon completion of Marin Mall. With the addition of a traffic actuated traffic signal at the Nellen Avenue and Paradise Drive North/Redwood Highway intersection, widening the northbound Paradise Drive North approach to Nellen Avenue to two lanes, and widening Redwood Highway up to Industrial Way to four lanes, level of service "C" operation could be achieved. Alternatively, Paradise Drive North could be developed as an extension of San Clemente Drive along the Northwestern Pacific right-of-way and intersect with the easterly extension of William Avenue. Access to northbound U.S. 101 would be accomplished by a left turn onto William Avenue and a right turn on to the on-ramp. Level of service "C" operation would be provided.

FREEWAYS

Guidelines for estimating the level of service of freeway segments have also been developed and calibrated by Marin County for the Marin County Balanced Transportation Plan. Table 7 presents the level of service categories (C through F) considered in this analysis of freeways and indicates the corresponding traffic volume ranges, average travel speed conditions, and qualitative definition of each category. The Marin Countywide Plan recommends level of service "D" as the standard for freeway operation.

Table 8 presents the level of service operation of U.S. 101 in the vicinity of the study site under various existing and future traffic volumes and for the existing geometries of U.S. 101 as well as with the addition of one travel lane in each direction. Development options and resulting traffic volumes for which levels of service have been determined include the existing freeway geometrics for existing traffic, existing traffic plus Marin Mall generated traffic, 1985 projected traffic, and 1985 projected traffic plus Marin Mall traffic. Levels of service were also developed for 1985 traffic volumes with or without Marin Mall for the freeway with an additional travel lane in each direction. From the table it is apparent that the freeway is presently operating at a wide variety of levels of service in the vicinity of the site. This is due to the varying peak direction traffic volumes (northbound during the PM peak hour period), the reduction in through traffic volume as traffic exits the freeway and the varying geometric characteristics, i.e., lane drops. Addition of Marin Mall traffic to existing traffic volumes reduces the level of service slightly along the freeway except south of Tamalpais Drive which would remain unchanged. Projected 1985 traffic volumes with or without Marin Mall development will result in the reduction of service level to "F" for most freeway segments. The exception is U.S. 101 south of the Greenbrae Interchange which has more capacity

Table 7
LEVEL OF FREEWAY SERVICE INTERPRETATION

Level of Service*	Description*	Typical Vehicle Volume Range Vehicles per Lane**
C	Good operation, stable flow, speeds greater than 50 m.p.h.	less than 1,450
D	Fair operation, approaching instability; speeds greater than 40 m.p.h.	1,450 - 1,650
E	Poor operation, unstable flow, speeds about 30 m.p.h.	1,650 - 2,000
F	Forced-flow, freeway acts as storage for vehicles; speeds less than 30 m.p.h.	greater or less than 2,000

* Based on National Academy of Sciences, Highway Capacity Manual, 1965.

** Developed by Marin County for the Marin County Balanced Transportation Plan.

Table 8
PM PEAK HOUR LEVELS OF FREEWAY SERVICE
Existing and 1985 Traffic Volumes

U.S. Highway 101 Segment	Existing Freeway				Freeway with 2 additional travel lanes	
	Existing traffic	Existing + Marin Mall traffic	1985 traffic	1985 + Marin Mall traffic	1985 traffic	1985 + Marin Mall traffic
South of Tamalpais	E	E	F	F	D	D
Tamalpais to Industrial Way	D-E	E	F	F	D	D
Industrial to Greenbrae	C-D	D	E	E	C-D	C-D
North of Greenbrae Interchange	D	E	F	F	E	E

Source: De Leuw, Cather & Company

than the other segments due to the northbound off-ramp geometrics and the high volume of traffic exiting the freeway at Sir Francis Drake Boulevard. However, even this section of freeway would operate at a congested level of service ("E"). Marin Mall appears to have no incremental effect on the levels of service of the freeway when added to the projected 1985 traffic volumes and only a marginal effect on the freeway when added to existing traffic. Without development of additional travel lanes diversions to alternate routes, increased use of transit, increased vehicle occupancies and a lengthening of the duration of the peak period will be required to handle the large projected 1985 traffic volume growths. Addition of one travel lane in each direction would result in significant levels of service improvements for 1985. For each freeway segment, the levels of service in 1985 would remain the same with or without Marin Mall if the two lanes were added.

Caltrans has scheduled on July 1 of this year to inaugurate experimental dual use of the present peak period exclusive bus lanes on U.S. 101 for carpools and buses for a trial period of about three months. Carpools are defined for lane use as vehicles with three or more passengers. If the trial proves successful, Caltrans will authorize it as a permanent change. Also, the Golden Gate Bridge District is soon expected to decide on whether or not to reduce or eliminate bridge tolls for carpool vehicles and whether to provide a carpool lane on the approach to and/or across the Golden Gate Bridge. If a carpool priority program is developed by the Golden Gate Bridge District, its start is expected to coincide with the U.S. 101 carpool lane implementation. Counts by Caltrans indicate that there are 380 carpools presently operating on U.S. 101 in the vicinity of the study area. Depending on the level of carpool priority assigned at the Golden Gate Bridge, diversions of drivers and passengers to new carpools could, as an upper limit, nearly double the number of carpools eligible for use of the exclusive lanes. Development of the carpool lanes and priority treatments at the Golden Gate Bridge

could, while difficult to quantify at this time before their inception, materially improve the level of service and the traffic flow of U.S. 101 in the vicinity of the study site now and in the future.

If U.S. 101 is not widened or significant shifts to transit or increased vehicle occupancies are not realized then some diversion of Marin Mall traffic to other routes would probably take place in 1985. This diversion would predominantly come from those peak westbound trips that are projected on west Sir Francis Drake Boulevard. While difficult to quantify, the diversion could be up to 110 peak hour trips, however, the actual diversion could be expected to be somewhat less. Local streets that could be impacted by diverted Marin Mall traffic from Sir Francis Drake Boulevard include Tamalpais Drive, Magnolia Avenue, Doherty Drive, Lucky Drive, Fifer Avenue, Nellen Avenue, and Bon Air Drive.

FREEWAY INTERCHANGES

The Tamalpais Drive interchange will be significantly impacted by Marin Mall traffic. As previously noted, four lanes were recommended on the Tamalpais Drive overpass and six lanes from there to San Clemente Drive. The interchange ramps currently operate at level of service "C". They are projected to operate at this same level with or without Marin Mall now and in 1985. The weaving section in the northbound direction between the northbound on- and off-loop ramps presently operates at level of service "D". The 1985 traffic volumes would cause this section to operate at level of service "E". Marin Mall traffic would not impact this weaving section because no traffic generated by the shopping center would pass through this portion of U.S. 101. The weaving section in the southbound direction between the southbound on- and off-loop ramps presently operates at level of service "C". It would operate at the same level of service in 1985 without Marin Mall. However, this southbound weaving section with Marin Mall would operate at "D" with existing

values and at "D-E" with 1985 volumes. A serious safety problem would exist in that the speed differential between the weaving traffic and the through freeway traffic that would be traveling at about 50 MPH would be significant. Elimination of the southbound and northbound weaving sections would improve both existing and future traffic flow along this portion of U.S. 101. Caltrans has proposed that both the northbound to westbound and the southbound to eastbound exit loops at Tamalpais Drive be removed and that the remaining northbound and southbound off-ramps be realigned to form right angle intersections with Tamalpais.

The northbound ramp would be aligned to provide direct access into the Marin Mall center as well as access onto eastbound and westbound Tamalpais Drive. The new northbound off-ramp would be located opposite a two lane one way entry only driveway into Marin Mall and would be controlled by a two-phase traffic signal. The off-ramp would have four lanes at the intersection; one for right turns, one for straight movements into Marin Mall driveway, one for straight movements into Marin Mall driveway and left turns, and one for only left turns. Traffic in the right turn lane would turn onto the protected eastbound curb lane on Tamalpais Drive. Turns from eastbound Tamalpais Drive to the Marin Mall driveway would be prohibited. Marin Mall access at this driveway would be restricted to inbound traffic. Detailed capacity analysis of this proposed configuration indicates that the intersection would operate at level of service "C" or better with existing plus Marin Mall traffic and 1985 plus Marin Mall traffic. Four approach lanes are needed on the off-ramp approach to insure that vehicles would not queue beyond the entrance to the bus pad, located on the existing off-ramp.

The southbound off-ramp intersection with Tamalpais Drive is recommended by Caltrans to have two approach lanes. With this configuration and a traffic signal it would operate at all development levels at level of service "C".

Removal of the two exit loops would also improve flow across the Tamalpais Drive overcrossing structure and allow it to operate satisfactorily with the existing roadway width. Otherwise, additional lanes would be required on the structure to provide sufficient merging areas for the loop ramps.

The Fifer Avenue and Industrial Way Interchange is presently developed to poor standards. However, because existing volumes are relatively low its operation is satisfactory. Detailed capacity analysis was performed for the critical intersections of the interchange ramps with the adjacent surface streets based on critical movement summations. The Fifer Avenue/Nellen Avenue/U.S. 101 Intersection presently operates at level of service "C" and would upon implementation of Marin Mall be at "C-D". A three lane Nellen Avenue would improve the level of service to "C". With 1985 traffic levels the intersection would operate at "D" without Marin Mall and at "F" with Marin Mall. Development of Nellen Avenue to three lanes would improve operation to "E". Redevelopment of the intersection as follows would improve the level of service to "C" in 1985 with Marin Mall and would improve the quality of flow and safety.

- Southbound Nellen Avenue at Fifer Avenue restricted to right turns only.
- Northbound Nellen Avenue at southbound on ramp restricted to right turns onto the freeway only.
- Two southbound/eastbound lanes developed on Nellen Avenue from Fifer Avenue to Redwood Highway/Paradise Drive North.
- The east-west portion of Nellen Avenue extended to Tamal Vista Boulevard. This would be on the proposed William Avenue extension alignment.

- The southbound U.S. 101 off-ramp at Fifer developed to two lanes -- one for right turn and straight movements and one for left turn movements.
- Traffic control at Intersection to remain as it presently exists.

These improvements will reduce the number of conflicts between vehicles at the intersection and will improve the access to adjacent properties.

The Industrial Way/Redwood Highway/U.S. 101 northbound on- and off-ramp intersection presently operates at level of service "C". It would remain at that level with immediate implementation of Marin Mall and also with 1985 traffic without Marin Mall. However, it would operate at "F" with 1985 and Marin Mall traffic. This would improve to level "C-D" if Redwood Highway were developed to four lanes between Nellen Avenue and Industrial Way.

As an alternative to improvement of either of these critical intersections, the previously mentioned William Avenue extension and a diamond interchange with U.S. 101 could be constructed. This is shown schematically in Figure 7. Applying ramp intersection capacity analysis developed for freeway interchanges by Caltrans, with four lanes on William Avenue, the new interchange would allow level of service "C" operation in 1985 with or without Marin Mall development and would relieve the two operationally deficient intersections existing with the U.S. 101 freeway ramps at Fifer Avenue and Industrial Way. This, however, should not be construed as indicating that it is an improvement that can be justified solely due to Marin Mall. It appears to be advisable as a result of the cumulative 1985 traffic pressures resulting from the assumed 1985 development levels.

The William Avenue improvement would improve the freeway operation, improve local circulation, reduce the barrier effect of the freeway and

If William Avenue were extended as a four lane street to Magnolia Avenue would provide a continuous east-west route that would significantly improve circulation in Corte Madera and Larkspur, allow improved transit routing, reduce through traffic on local streets such as Fifer Avenue, Lucky Drive, Doherty Drive and the south portion of Magnolia Avenue. This facility should be designed to provide fully integrated pedestrian and bikeway facilities. Experience has shown that proper design allows automobile and pedestrian/bicycle facilities to safely coexist. If William Avenue is built to four lanes then abandonment of the Northwestern Pacific Railroad spur would be required. A decision to construct the extension should be based on a detailed Environmental Impact Report.

The Greenbrae Interchange with U.S. 101 is presently operating unsatisfactorily at its interface with Sir Francis Drake Boulevard. The critical intersection of Sir Francis Drake with the northbound on- and off-ramps, is presently controlled by STOP signs and according to the ramp intersection capacity analysis guidelines developed by Caltrans is operating at level of service "E". However, as previously noted, Caltrans and the City of Larkspur are soon to improve the interchange in order to accommodate the traffic generation of the nearby Larkspur Ferry Terminal. Programmed improvements will include four lanes on east Sir Francis Drake Boulevard, a second exclusive left turn lane for westbound to northbound on-ramp traffic and development of two through movement lanes -- one with an optional right turn -- on the northbound off-ramp at Sir Francis Drake. Along with these geometric improvements, the southbound to eastbound off-ramp and the northbound on- and off-ramps will be signalized at Sir Francis Drake. These improvements will significantly improve the capacity of the interchange. With the improvements, the interchange would operate at level of service "C" for both existing and existing plus Marin Mall traffic volumes.

However, the high projected 1985 volumes would cause it to operate at level "F" with or without Marin Mall. The Lower Ross Valley Transportation Study indicated that without a reduced San Quentin Peninsula Development

that East Sir Francis Drake would have to be widened to six lanes to maintain existing levels of service or that a four fold increase in local bus service would have to take place from the current 43 local bus fleet level. These significant impacts, though, are largely unrelated to Marin Mall. Marin Mall generated traffic, according to our analysis, would only comprise three percent of the critical traffic lane volumes using the Greenbrae Interchange in 1985. In other words, of those vehicle movements that would serve to congest the interchange, only three percent are generated by Marin Mall. This amount is not enough to materially affect the level of service of the interchange. The most significant impacts are caused by traffic generated by the Larkspur Ferry Terminal and the proposed San Quentin Peninsula and Schultz Property developments.

CHAPTER V RECOMMENDATIONS

This chapter will summarize recommendations that were developed and analyzed in the previous chapter pertaining to vehicular traffic and develop pedestrian, bicycle, transit and internal circulation programs to mitigate the traffic impact of the Marin Mall Shopping Center.

HIGHWAY AND FREEWAY

Tamalpais Drive should be improved to provide:

- Two eastbound traffic lanes between Madera Boulevard and the northbound U.S. 101 off-ramp.
- Three eastbound lanes between the northbound off-ramp and San Clemente Drive.
- Three westbound lanes between San Clemente Drive and the northbound U.S. 101 on-ramp.
- Two westbound lanes between the on-ramp and Madera Boulevard.

The Tamalpais Drive/U.S. 101 Interchange, besides the widening of Tamalpais Drive should be improved as follows:

- Both the northbound to westbound and the southbound to eastbound exit loops at Tamalpais Drive should be removed.
- The existing northbound off-ramp should be realigned to intersect Tamalpais Drive opposite to the south entry road into the Marin Mall center. The off-ramp at the intersection should be controlled

by a traffic actuated two phase signal and have four approach lanes at the intersection; one for right turn movements, one for straight movements into the Marin Mall driveway, one for left turn movements and straight movements into the Marin Mall driveway and one for only left turn movements.

- The existing southbound off-ramp at Tamalpais Drive should be realigned to provide eastbound as well as westbound access onto Tamalpais Drive. It should have two approach lanes and be signalized with a two phase traffic actuated signal.

The San Clemente Drive/Tamalpais Drive Intersection should be controlled by a three phase actuated traffic signal.

San Clemente Drive should be extended north of Tamalpais Drive to serve as the peripheral circulation road for the center. It should generally be developed to four lanes with a left turn median. The southbound approach to Tamalpais Drive should have three lanes. (This project is considered to be part of the on-site work and, therefore, no cost estimate will later be developed.)

Redwood Highway should be developed to four lanes between its intersection with Paradise Drive North and Industrial Way.

Nellen Avenue should be developed to three lanes, two southbound and one northbound, between Fifer Avenue and the U.S. 101 underpass. It should remain two lanes through the underpass due to restricted horizontal clearance between the bridge piers. Between the underpass and Paradise Drive North/Redwood Highway, Nellen should have three eastbound lanes and one westbound lane. The eastbound lanes should be developed with double left turn lanes at the intersection.

The Nellen Avenue/Paradise Drive North/Redwood Highway intersection should be controlled by a two phase actuated traffic signal.

Redevelop the Fifer Avenue/Nellen Avenue/U. S. 101 intersection in the short term as follows:

- Southbound Nellen Avenue at Fifer Avenue restricted to right turns only.
- The southbound U. S. 101 off-ramp at Fifer developed to two lanes -- one for right turn and straight movements and one for left turn movements.

Redevelop the Fifer Avenue/Nellen Avenue/U. S. 101 intersection in the long term (approximately 1985) as follows:

- Northbound Nellen Avenue at southbound U. S. 101 on-ramp restricted to right turns only onto the freeway. The ultimate configuration of the Fifer/Nellen/U. S. 101 intersection is shown in Figure 8.
- The east-west portion of Nellen Avenue should be extended to Tamal Vista Boulevard. This would be on the proposed William Avenue extension alignment and either requires lowering of Nellen Avenue under the U. S. 101 underpass or abandonment of the Northwestern Pacific Railroad spur that serves Handi Kup Company.

For both near and long term recommendations traffic control at the Fifer/Nellen intersection should remain as it presently exists.

Paradise Drive North should be eliminated adjacent to Marin Mall, and widened to provide two northbound lanes at its approach to the Nellen/Redwood intersection.

Paradise Drive South should remain in two way operation, rather than the one-way operation proposed by Caltrans as part of the Tamalpais Drive interchange reconstruction, but should have no median opening on Tamalpais Drive. This would allow for right turns in and out only.

Not to Scale

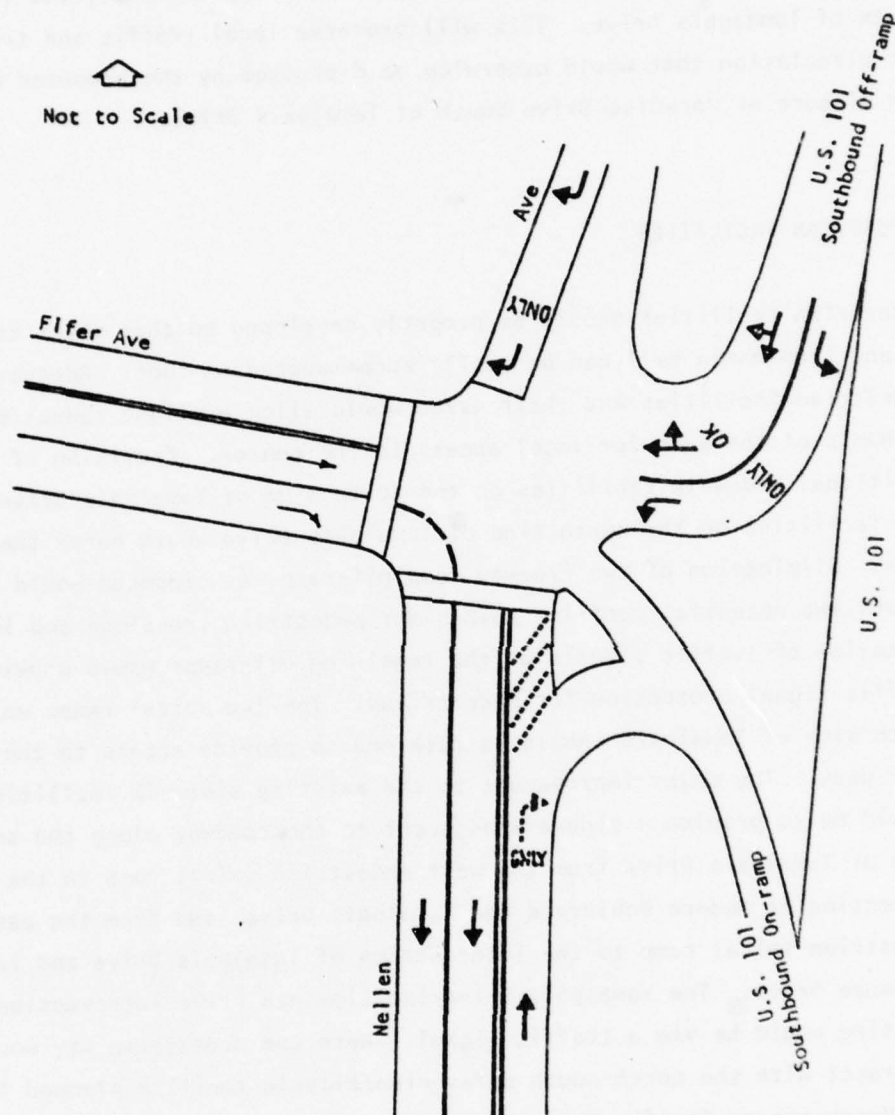


Figure 8
PROPOSED FIFER/NELLEN/U.S. 101 IMPROVEMENTS

A new east-west road should be developed between Paradise Drive South and San Clemente Drive on existing vacant land approximately 800 feet south of Tamalpais Drive. This will preserve local traffic and transit circulation that would otherwise be disrupted by the proposed median closure of Paradise Drive South at Tamalpais Drive.

PEDESTRIAN FACILITIES

Pedestrian facilities should be properly developed so that short trips to and from Marin Mall can be easily accommodated on foot. Adequate pedestrian facilities and their usage would allow a slight reduction in emphasis of the auto for local access to the center. Provision of additional sidewalk facilities on the south side of Tamalpais Drive and new facilities on the north side of Tamalpais Drive would serve these ends. Elimination of two freeway loop off-ramps as proposed would eliminate two potential conflict points for pedestrian crossings and implementation of traffic signals at the remaining off-ramps would provide traffic signal protection for pedestrians. The two spiral ramps on the south side of Tamalpais should be retained to provide access to the bus stop pads. The major improvement to the existing sidewalk facilities should be to provide a sidewalk adjacent to the roadway along the south side of Tamalpais Drive from the west pedestrian spiral ramp to the intersection of Madera Boulevard and Tamalpais Drive, and from the east pedestrian spiral ramp to the intersection of Tamalpais Drive and San Clemente Drive. The Tamalpais Drive/San Clemente Drive intersection crossing would be via a traffic signal. Here the pedestrian way would intersect with the north-south pedestrian/bicycle facility planned for the Northwestern Pacific Railroad right-of-way. This sidewalk route would be safe as there would be no uncontrolled at grade crossings.

Two optional programs will be detailed for additional pedestrian facilities. At least one of these alternatives should be developed to complement Marin Mall. The first alternative would be the development of a

pedestrian facility along the north side of Tamalpais Drive from San Clemente Drive to the existing sidewalk on the west side of the interchange. This route would progress from the Northwestern Pacific Railroad right-of-way across the shopping center perimeter road via a traffic signal protected crossing and along the south boundary of the shopping center, which is also the north edge of Tamalpais Drive. It would continue west on Tamalpais Drive across the northbound on-ramp. From there the sidewalk would continue across the bridge structure, the southbound loop on-ramp and the signalized southbound off-ramp and connect to the existing sidewalk. The north sidewalk would entail two crossings where pedestrian-vehicle conflicts would arise. Providing a sidewalk along the north side of Tamalpais Drive across the overcrossing structure is discussed in terms of structural requirements in the appendix. This plan would provide a sidewalk on the side of the street where potential demand is greater.

An alternative or possibly complementary plan would be to provide an entirely grade-separated pedestrian bridge over U. S. 101 north of the Tamalpais Drive interchange connecting the Marin Mall and the Corte Madera Center. Access to the bridge at either end should be from the second level of stores located in each of the shopping centers. In the Marin Mall center, a multi-leveled department store such as Macy's, should be relocated to the southwest corner of the shopping area. In the Corte Madera center, assuming a new structure is to be constructed, it should be located as close to the Marin Mall structure as is practical. The pedestrian bridge could then be constructed between them. This would allow dual use of the internal vertical circulation systems (stairs, elevators and escalators) of the stores for access to the pedestrian bridge. The bridge would serve to allow pedestrian access between the centers and thus reduce the need for auto trips as well as physically tie the two centers together. The degree of sophistication of the bridge could vary widely. The following is a list of possible alternatives:

- Ten foot wide bridge.

- Ten foot wide covered bridge.
- Fifteen foot wide bridge with a manually operated shuttle vehicle or people mover as well as a pedestrian walkway.
- Seventy foot wide shopping mall with 50 foot deep stores developed on one side of the bridge. A bridge of 700 feet in length could provide approximately 35,000 gross feet of leasable floor area.

Supplementary vertical circulation in the form of stairs or ramps should be provided on either side of U. S. 101, external to the stores, to allow access to the parking facilities of both centers as well as provide access to the bus stop pads. In this way pedestrian access to the freeway bus stops would be improved over what it is today. Also, this would allow future provision of park-and-ride facilities in the parking areas of both centers. The pedestrian bridge facility in addition to providing a safe route for pedestrians would serve to strengthen the bond between the two shopping centers. The approximate bridge location is shown in Figure 9.

BICYCLE FACILITIES

Bicycle access to Marin Mall should be promoted by the provision of attractive and adequate facilities. This would somewhat reduce auto use to the center, give a wider choice of travel mode for those who live close to the center, and allow for recreational travel by those who live in the general vicinity.

In the north-south directions bicycle facilities are best provided via a bike path at least ten feet in width along the Northwestern Pacific Railroad right-of-way immediately east of the San Clemente Drive extension. This facility should be linked with bike lane facilities located on Tamalpais Drive. The necessary width for Tamalpais Drive bike lanes

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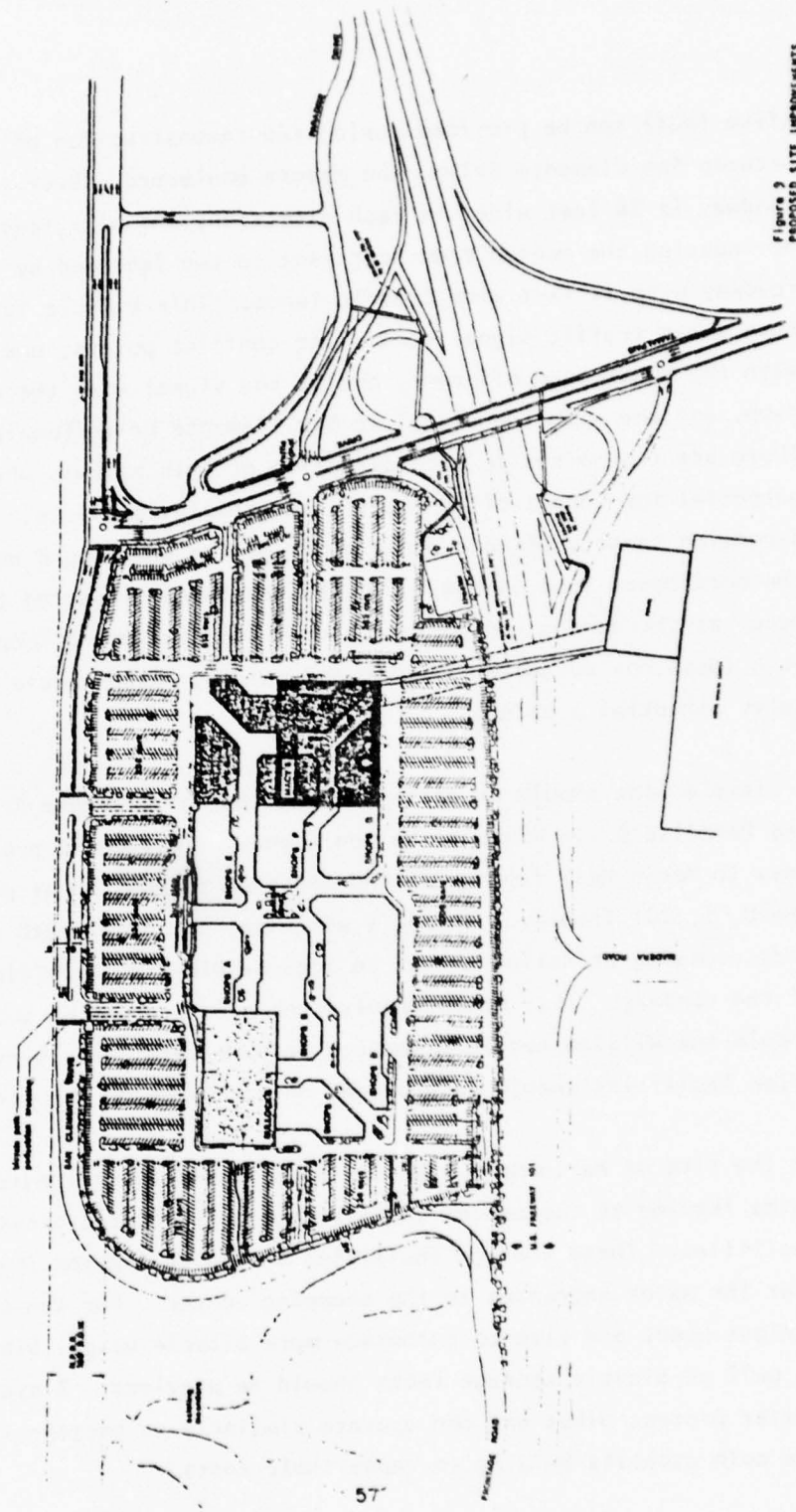


Figure 3
PROPOSED SITE IMPROVEMENTS

(five feet) can be provided during the reconstruction of Tamalpais Drive between San Clemente Drive and Madera Boulevard. Over the freeway the roadway is 26 feet wide, in each direction, and bike lanes can be developed by reducing the median from four feet to two feet and by striping the roadway with 11 feet wide traffic lanes. This bicycle facility would have three traffic signal controlled conflict points; one the signal with the southbound off-ramp, one at the signal with the northbound off-ramp, and one with the signal at San Clemente Drive/Tamalpais Drive. There are two points in each direction of this pathway where there is a potential for uncontrolled bicycle-automobile conflicts. In the eastbound direction these conflicts would occur at the southbound on-ramp and at the northbound loop on-ramp. In the westbound direction the conflicts would occur at the northbound on-ramp and at the southbound loop on-ramp. At both locations adequate striping and warning signs should be sufficient to solve potential problems.

A bicycle lane should be striped along the San Clemente Drive extension and Paradise Drive North to Nellen Avenue. This would provide bicycle access to Marin Mall from north and south of the center at points crossing the U. S. 101 freeway. There is adequate room underneath the U. S. 101 undercrossing at Nellen Avenue to provide bicycle facilities on each side of the roadway. This would require the construction of some retaining walls. Should the William Avenue extension be developed, then bicycle and pedestrian facilities should be provided on each side of the street.

On the site of Marin Mall itself, there should be designated bicycle paths leading to the center and strategically located bicycle storage facilities. These storage facilities should be located inside the mall near the major entrances to the shopping center. For the needs of the various users and also to encourage more bicycle usage, bicycle lockers as well as bicycle storage racks should be provided. Bicycle lockers better protect bikes and can operate similarly to baggage lockers with the coin deposits helping to repay their costs.

TRANSIT SERVICE

Two types of transit service as proposed by the Marin County Transit District would serve Marin Mall as well as Corte Madera: the existing local freeway express service with stops at the Tamalpais Drive interchange and the proposed local bus routes which would use Paradise Drive, the freeway, and points beyond. The routes primarily serving Marin Mall, Routes 19 and 21, were previously detailed in the section on trip distribution in Chapter III.

Service on the freeway in the southbound direction is adequate with the existing bus stop pad located in the northwest quadrant of the interchange. The northbound bus stop is presently located in the southeast quadrant of the interchange which is too far from Marin Mall to provide adequate service for the center. To provide better service, by shortening the walking distance to the center, it is proposed that this bus stop pad be relocated to the northeast quadrant of the interchange midway between the proposed northbound on-ramp and the old northbound loop off-ramp. A bus passenger would then only have to walk approximately 400 feet to the nearest store entrance.

For local service it is proposed that the bus routes follow San Clemente Drive through its intersection with Tamalpais Drive to the southerly main entrance on the east side of Marin Mall. The bus route (Route 19) which connects Paradise Drive, Marin Mall, and points to the north such as the Ferry Terminal would then enter the shopping center and traverse the east central lot in a clockwise direction stopping at a central bus stop facility located between shops "A" and shops "E" in the center of Marin Mall. From there the bus would exit at the northeast driveway and continue on the San Clemente Drive extension and Paradise Drive North to the Lucky Drive Interchange. The return bus trip would reverse this route. The second bus route (Route 21), which is planned to terminate at

the Marin Mall, would always enter the shopping center at the southeast entrance and via a clockwise loop terminate at the central bus stop facility. This bus stop facility should have a central platform which buses can load and unload passengers onto from either side. A schematic of the bus routes and the major bus stop facility is shown on Figure 10. Provision of a central bus stop facility and adequate room for holding over buses permits easy transfer between bus routes and provides an easily identified bus facility image. Identification is one of the key elements in promoting transit use. By locating the major bus stop facility on the east side of the shopping center, it is removed somewhat from the heavy traffic conflicts expected along Tamalpais Drive and the southeast and northwest corners of the shopping center. Should transfers between freeway and local bus routes be desired by transit patrons this interchange would occur through the shopping center.

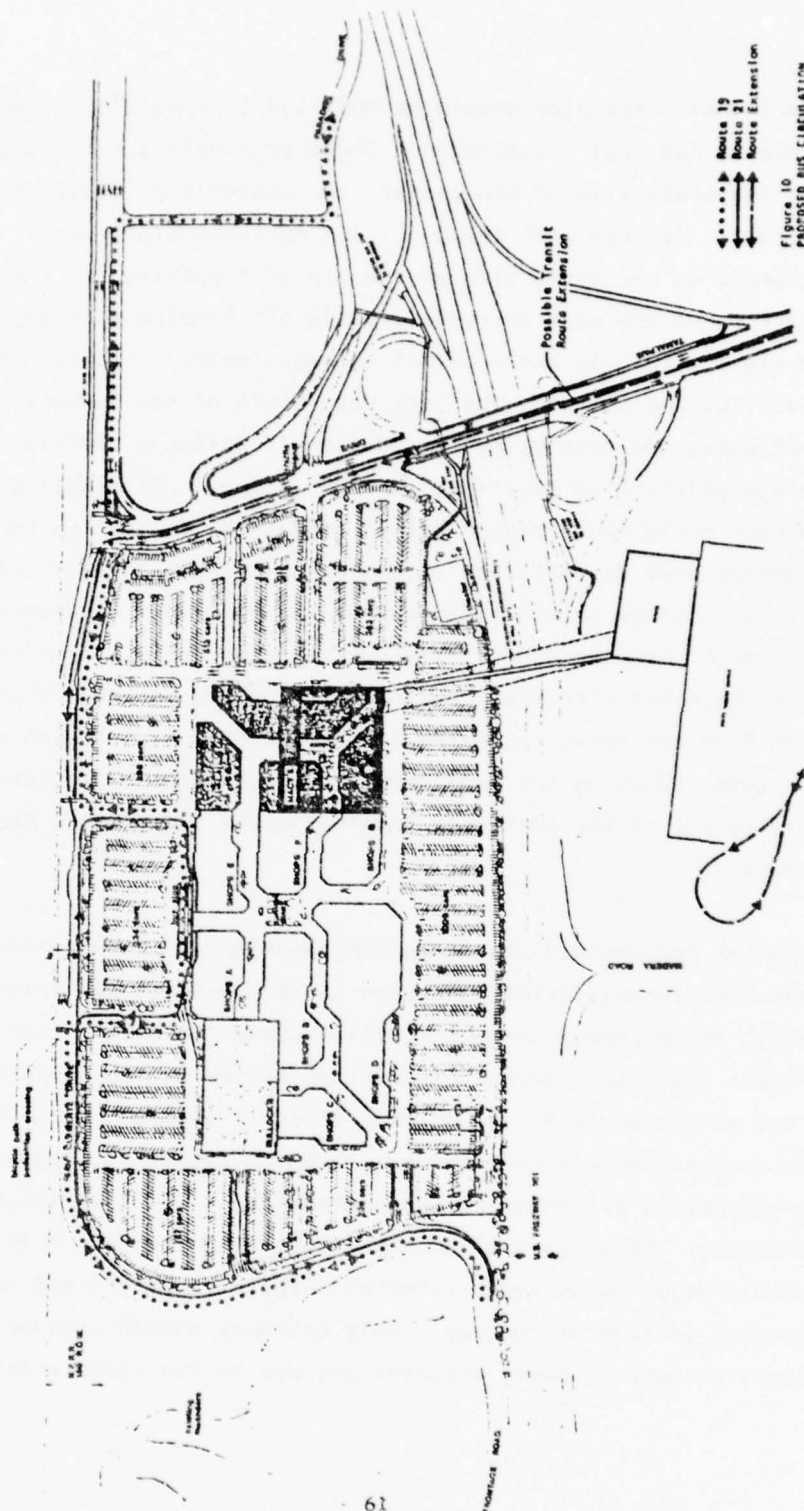
Provision of this transit facility would provide for future expansion in transit service as demand warrants and funds become available. This kind of facility will show a definite commitment by Marin Mall to the concept of transit service.

Alternative transit routing to those developed by the Marin County Transit District are possible to serve Marin Mall and tie it to other local trip generators. One alternative that would tie Marin Mall to the Corte Madera Center which is shown on Figure 10, would be to reroute Route 19 to traverse Tamal Vista Boulevard and Madera Boulevard instead of Paradise Drive North and make stops at both Marin Mall and the Corte Madera Center.

MARIN MALL CIRCULATION

A carefully laid out circulation system, including parking areas, peripheral roadways and access points will insure safe and efficient access for shoppers and employees of Marin Mall. Certain key features of the

↑ NORTH



Marin Mall site plan should be modified or more clearly defined to enhance internal circulation. These proposals are include in Figure 9. On the south side of the center, the westerly driveway should be more directly aligned with the U. S. 101 northbound off-ramp. Recommended changes on the south side of the center's parking lot include eliminating parking on the east entry/exit aisle off Tamalpais Drive, providing for a right turn only entry off of the west entry driveway into the south-east lot and aligning the east-west aisle of the southeast lot with this entrance, and developing an additional eastbound traffic lane in the aisle adjacent to Macy's and the "H" shops. Eliminating parking on the access aisle would reduce driver confusion, congestion and delay. The parking area on that side of the mall would be heavily utilized because it is in close proximity to one of the two major department stores and the major access point. This parking area would, therefore, benefit from the increased directness and capacity of the internal aisles. Also, the San Clemente Drive extension in the southbound direction should be widened to three lanes on the Tamalpais Drive approach to provide right turn capacity out of the east-west internal aisle adjacent to Macy's and the "H" shops.

Another recommended change is for redesign of the east-west portion of the San Clemente Drive extension in the vicinity of Paradise Drive North to encourage through traffic to use the public roadway system rather than the internal circulation system of the shopping center. The road as presently designed leads directly into the shopping center. In conjunction with providing a larger curve on the roadway, the two north-south access driveways on the north side of the site should both be moved eastward. This would allow the driveway on the west side to be aligned with a major north-south internal circulation aisle and locate it on a tangent section of roadway. This driveway should also be widened to four lanes because of heavy expected use due to its close proximity to the

the Lucky Drive Interchange. The second access driveway must be relocated to the east in order to provide additional separation between access points and improve operation of the access intersections.

CHAPTER VI COSTS

CONSTRUCTION

Preliminary construction cost estimates, based on 1976 dollars, for each of the proposed off-site improvements that were recommended in Chapter V are included in Table 9. A general description of each project is given and the costs are broken down into right-of-way and construction costs components. Special costs such as abandonment of the Northwestern Pacific Railroad track or severance damages to affected businesses have not been included due to their indefinite nature. All right-of-way land costs have been estimated at \$2.00 per square foot based on a recent local purchase of land for street development. At a later date, the exact cost of the land should be verified by a qualified appraiser. Construction costs reflect estimates as appropriate for pavement structure, sidewalks, curb and gutter, street lighting, retaining walls, structures and traffic signals. A structural discussion is included in the appendix concerning the various alternative pedestrian facilities.

It must be noted that not all of the improvements listed in Table 9 are recommended due primarily to Marin Mall. Only items 1 through 6, the near term item 7, and items 8 and 9 are necessary to mitigate the direct traffic impact of Marin Mall. The long term portion of item 7 is recommended to mitigate the confluence of 1985 planned development level traffic. The item 10 proposals are optional to item 9 and are suggested only as a possible treatment to tie the adjacent centers together and better provide for pedestrians. The total cost of the improvements that are recommended to mitigate the transportation impact of Marin Mall ranges between \$1.54 and \$1.63 million. This cost should primarily be born by

Table 9
PRELIMINARY CONSTRUCTION COST ESTIMATES
Marin Mall Related Project

Location	Project Description	Costs (1976 \$)		
		Right-of-Way	Construction	Total
1. Tamalpais Drive - U. S. 101 to San Clemente	Widening to 6 Lanes	\$ -	\$ 60,000	\$ 60,000
2. Tamalpais Drive/ U. S. 101 Interchange & Approaches	Interchange Improvements & Two Traffic Signals	20,000 ¹	1,000,000 ²	1,020,000
3. San Clemente/ Tamalpais Intersection	Traffic Signal Installation	-	40,000	40,000
4. Redwood Highway - Nellen to Industrial; and Paradise Dr. N. Approach Widening	Widening to 4 Lanes; and 2 Lanes	60,000	110,000 ³	170,000
5. Nellen Avenue - Fifer to Redwood	Widening to 3 Lanes	-	30,000	30,000
6. Nellen/Paradise/ Redwood Intersection	Traffic Signal Installation	-	40,000 to 50,000	40,000 to 50,000 ⁴
7. Fifer/Nellen/ U. S. 101 Vicinity	Near Term - Intersection Improvements Long Term - Nellen Avenue Extension	- 80,000	1,000 160,000	1,000 240,000 ⁵
8. East-West Circulation Roadway S/O Tamalpais Drive	New 4 Lane Roadway	60,000	40,000	100,000
9. North Side of Tamalpais Drive Interchange	Add Sidewalk to Overcrossing Structure	-	80,000 to 160,000	80,000 to 160,000
10. Marin Mall/Corte Madera Pedestrian Connector	Open Bridge	-	350,000	350,000
	Covered Bridge	-	480,000	480,000
	Open Bridge With Vehicle Guideway	-	480,000	480,000
	Bridge With Mall Shops	-	2,400,000	2,400,000

1. Does not include possible severance damages.
2. Estimated by Caltrans - March, 1976.
3. Assumes automatic gate protection for Northwestern Pacific siding track.
4. Higher value assumes interconnect with railroad crossing protection.
5. Assumes Northwestern Pacific siding abandonment (No cost included for track abandonment.)

the developer of Marin Mall, however, each construction project item should be negotiated by the developer with other affected jurisdictions to obtain their full or partial financial participation. Most of the recommended projects would serve not only Marin Mall-related traffic, but also local and regional, existing and future traffic. There are certain projects that the developer could be expected to finance independently which would include the Tamalpais Drive widening, signalization of San Clemente/Tamalpais and the addition of a sidewalk to the U. S. 101/Tamalpais interchange. The project that could be jointly financed by Caltrans, and Corte Madera, in addition to the developer would be reconstruction of the Tamalpais Drive interchange. The Town of Corte Madera and other local governmental agencies could help finance the widenings of Redwood Highway/Paradise Drive North and Nellen Avenue, and the signalization of Nellen/Paradise/Redwood. Also, the adjacent railroad could be expected to share in the cost of automatic gate protection for their track crossing Paradise Drive North. The near term improvement recommended for the Fifer/Nellen/U. S. Intersection could be primarily financed by Corte Madera and Caltrans because the recommendations are primarily public safety improvements. The recommended east-west circulation road, which would benefit local traffic south of Tamalpais, could be financed by the developer and by a local improvement district formed by nearby property owners. Also, a condition to develop local property could be dedication of the roadway.

MAINTENANCE

Increased traffic on the streets of the Town of Corte Madera due to Marin Mall will result in increased street maintenance requirements. According to the peak hour traffic projections for Marin Mall, there will be 20 percent increase in vehicle miles traveled on Corte Madera arterial and collector streets during peak periods over existing travel levels. Presently,

Corte Madera spends approximately \$120,000 yearly on all street maintenance programs of which they estimate 25 percent is devoted to arterial and collector street maintenance. Assuming, for the purpose of this estimation, that street maintenance is strictly related to vehicle miles traveled, then, Marin Mall traffic would represent an increase of five percent (\$6,000) to the Corte Madera yearly street maintenance budget. To insure that truck traffic related to Marin Mall does not cause strain on the pavement structure of local streets, all trucks should be restricted to Tamalpais Drive and its freeway interchange for access to the center. The maintenance of the proposed traffic signals would also add to local maintenance budgets. The signal proposed for the Tamalpais Drive/San Clemente Drive Intersection and the signal at the Nellen Avenue/Redwood Highway/Paradise Drive North intersection, which would primarily be located in the City of Larkspur, would require yearly maintenance. Recent Caltrans records indicate an average annual traffic signal maintenance cost of \$700 per installation. The cost of maintenance of the two proposed signals at the Tamalpais Drive interchange would be born by Caltrans.

POLICE SERVICES

Many regional shopping centers require local police to direct traffic during the busy Christmas shopping season due to the unusually high trip generation during that period. This occurs even with adequate shopping center security forces, good access and circulation roadway geometrics, and sophisticated traffic control devices. Marin Mall may require uniformed officers from the Town of Corte Madera during the Christmas shopping season (approximately two weeks before Christmas and two days after) to regulate the flow of traffic. A complement of one or two officers may be necessary during this period to direct traffic in and out of the center at primary access points such as Tamalpais Drive, eliminate queues both on local streets and adjacent

freeway ramps and/or manually operate traffic signal control. Normally, shopping center crime is handled by the center's security forces and, therefore, would not require increased police efforts.

CHAPTER VII

ALTERNATIVE SITE USES ANALYSIS

This chapter will analyze the traffic impacts of various alternative uses for the study site and develop the general level of local street and highway improvements required to mitigate their impacts. Also, proposals for an exclusive busway stop or rail transit station in the vicinity of the study site will be examined in terms of their potential traffic impacts.

SITE USES

For the purposes of the alternative site analysis seven distinct site plans were defined. Each would occupy all or a portion of the area shown in Figure 1 for "Marin Mall." The evaluated site uses and their assumed acreages are:

1. Residential (50.27 acres)
2. Office (26.5 acres)
3. Light Industry (22.7 acres)
4. Retail and Office (42.9 acres)
5. Office and Light Industry (26.9 acres)
6. Developed Open Space (50.27 acres)
7. No Development

TRIP GENERATION

The trip generation of each of the alternative site plans would vary due to the specific trip making characteristics of the development, the people

accessing it and the size of each development. Table 10 presents the daily vehicle trip generation of each of the alternative sites as well as Marin Mall. For each different type of land use activity a representative daily trip ends rate was obtained based on recent studies.* These trip rates have been adjusted to reflect expected transit usage to and from the site.

As can be seen in the table, the daily vehicle trip rates for the alternative site uses vary from 750 to 20,570 and they generally are significantly less than the 26,000 daily trip ends projected for Marin Mall. In fact, for all of the alternative site uses except Alternative 4, Marin Mall's trip generation is at least 4.7 times greater.

Table 11 presents the weekday peak hour (5 PM - 6 PM) trip generations of inbound and outbound vehicle and person transit trips for the alternative site uses and Marin Mall. Again, Marin Mall has the highest vehicle trip generation in either direction, but due to the higher peak hour directional generation characteristics of the various alternative uses, each of the peak hour volumes in at least one direction is a higher percentage of the Marin Mall peak hour trip generation than they were of the daily trip generation. For example, Alternative 1's daily trip generation represents 21 percent of Marin Mall's, but during the peak hours in the inbound direction it represents 38 percent.

* These include:

Institute of Traffic Engineers, Traffic Engineering, March, 1974.

State of California, Caltrans, Trip Ends Generation Research Counts, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1973, 1974, 1975.

W. A. Alroth, Parking and Traffic Characteristics of Suburban Industrial Development, Highway Research Record No. 237.

Institute of Traffic Engineers, Technical Notes, Fall, 1975.

Table 10
DAILY TRIP GENERATION
Alternative Sites and Marin Mall

<u>Site Use</u>	<u>Activity</u>	<u>Size</u>	<u>Daily Vehicle Trip End Generation Rate</u>	<u>Daily Vehicle Trip Ends</u>
Marin Mall	Retail	670,000 ft ²	38.4/1,000 ft ²	<u>26,000</u> 26,000
Alternative 1	Multi-Family Dwell.	870 units	6.3/Unit	<u>5,480</u> 5,480
Alternative 2	Office Restaurants	270,000 ft ² 20,000 ft ²	9.6/1,000 ft ² 20/1,000 ft ²	2,590 <u>400</u> 2,990
Alternative 3	Light Industry	325,000 ft ²	7/1,000 ft ²	<u>2,280</u> 2,280
Alternative 4	Office Retail Theater Restaurants	200,000 ft ² 250,000 ft ² 1,000 seats 20,000 ft ²	9.6/1,000 ft ² 67/1,000 ft ² 1.5/seat 20/1,000 ft ²	1,920 16,750 1,500 <u>400</u> 20,570
Alternative 5	Office Light Industry	160,000 ft ² 200,000 ft ²	9.6/1,000 ft ² 7/1,000 ft ²	1,540 <u>1,400</u> 2,940
Alternative 6	Recreation	50 acres	15/acre	<u>750</u> 750
Alternative 7	"No Build"	- - -	- - -	- -

Source: De Leuw, Cather & Company

Table 11
PEAK HOUR TRIP GENERATION, 5 PM - 6 PM
Alternative Sites and Marin Mall

<u>Site Development</u>	<u>Motor Vehicle Trips</u>		<u>Person Transit Trips</u>	
	<u>Inbound</u>	<u>Outbound</u>	<u>Inbound</u>	<u>Outbound</u>
Marin Mall	1,100	1,100	60	60
Alternative 1	420	180	90	10
Alternative 2	150	400	10	30
Alternative 3	140	420	10	30
Alternative 4	880	1,000	30	60
Alternative 5	160	490	10	40
Alternative 6	20	40	0	0
Alternative 7	0	0	0	0

Source: De Leuw, Cather & Company

Transit trip generation was determined based on runs of the Marin County land-use gravity transportation model for various study site land uses. The transit routes that were previously assumed to serve Marin Mall were also assumed to serve the alternative sites. As is evident in Table 11, transit use to and from the alternative site developments is generally less than for Marin Mall. However, for Alternative 1, which is residential use, the inbound trips using transit would be 50 percent greater than for Marin Mall.

TRIP DISTRIBUTION

Trip distributions for the alternative site developments were developed based on additional runs of the Marin County model which were the same ones used to determine the transit mode split. Traffic analysis zones were aggregated into districts and trip tables were generated for the PM peak hour that indicated by direction the origins and destinations of each peak hour person trip to and from the site. These distributions were broken down into percentages and are shown by general directional category in Table 12 along with those percentages for Marin Mall. The directional distributions of the alternatives are in the same general range as those of Marin Mall. There is more difference evident for inbound trips than outbound trips. Inbound trips from the south vary as much as 15 percentage points while the outbound trips in all directions do not vary more than five percentage points.

ANALYSIS AND RECOMMENDATIONS

The analysis of the previous sections has indicated that motor vehicle trip generation for the alternative uses during both daily and peak hour periods

Table 12
PEAK HOUR HIGHWAY VEHICLE TRIP DISTRIBUTION PERCENTAGES
Alternate Sites and Marin Mall

Site Development	D I R E C T I O N							
	Inbound				Outbound			
	N	S	E	W	N	S	E	W
Marin Mall	28%	32%	14%	26%	28%	31%	14%	27%
Alternative 1	33%	33%	11%	23%	29%	34%	9%	28%
Alternative 2	36%	17%	17%	30%	32%	32%	13%	23%
Alternative 3	36%	17%	17%	30%	32%	32%	13%	23%
Alternative 4	32%	25%	15%	28%	30%	32%	13%	25%
Alternative 5	36%	17%	17%	30%	32%	32%	13%	23%
Alternative 6	26%	38%	10%	26%	27%	35%	13%	25%
Alternative 7	-	-	-	-	-	-	-	-

Source: De Leuw, Cather & Company

and in both the inbound and outbound directions would be less than that expected for Marin Mall. For this reason, analysis of traffic impact of the alternative sites will focus on those street segments, intersections and freeway interchanges for which significant traffic impact due to Marin Mall was found and for which recommendations were previously developed.

In the following analysis, alternatives that have similar trip making characteristics will be discussed together to confine the extent of the analysis.

Alternative 1 consists of multi-family dwelling units which during the evening peak hour would generate trips predominantly in the inbound direction. Table 13 presents the evening peak hour levels of service for those streets and highways that were previously found to be deficient with development of Marin Mall. Redwood Highway between Nellen Avenue and Industrial Way, Nellen Avenue between Fifer Avenue and Redwood Highway, the Nellen Avenue/Fifer Avenue/U. S. 101 intersection and the Nellen Avenue/Paradise Drive North/Redwood Highway intersection, would all operate at level of service "C" with development of Alternative 1 under existing conditions. Under 1985 conditions, with site development, they would operate at level of service "D" which is an adequate service level. A relatively minor improvement that would improve traffic flow and safety would be the short range improvements shown in Figure 8 for the Nellen/Fifer/U. S. 101 intersection. (Except Nellen would not have to be redeveloped to three lanes.)

Detailed capacity analyses performed for the Tamalpais Drive/U. S. 101 interchange indicate that modifications would not be necessary to handle evening peak traffic generated by Alternative 1. Weave analysis performed for southbound U. S. 101 as well as roadway capacities determined along Tamalpais Drive on the U. S. 101 overcrossing at the critical merge and

Table 13
 PM PEAK HOUR LEVELS OF HIGHWAY SERVICE
 Existing and 1985 Traffic Volumes
 Alternative 1 Site Use

	<u>Exist.</u>	<u>Exist. + Alt.</u>	<u>1985</u>	<u>1985 + Alt.</u>
Fifer/Nellen/U.S.101 Intersection	C	C	D	D
Nellen/Paradise Drive North/ Redwood Highway Intersection	C	C	C	D
Redwood Highway-Nellen to Industrial	C	C	D	D
Nellen-Fifer to Redwood Highway	C	C	C	D
U. S. 101/Tamalpais Interchange*	C-D	C-D	D	D

* Values shown are averages of critical locations.

Source: De Leuw, Cather & Company

diverge points indicate that the interchange in its present configuration with current traffic volumes would operate at the same level of service ("C-D") with or without Alternative 1 development. Similarly, the 1985 operation of the interchange would be at level of service "D" with or without Alternative 1 development. Therefore reconstruction of the interchange would not be necessary.

To accommodate Alternative 1, Tamalpais Drive between the northbound on- and off-ramps and San Clemente Drive should be developed to four lanes, which would provide level of service "C" operation both now and in 1985. The main entry driveway to the site should be two-way and located opposite Paradise Drive South. Other entries should be located on the east and north sides. A left turn lane should be developed on Tamalpais Drive for turns into the entry driveway from the eastbound direction. San Clemente Drive should be extended to the north and formed into a roadway around the development similar to that proposed for Marin Mall. A five phase traffic-actuated signal should be installed at the Tamalpais Drive/entry driveway/Paradise Drive South intersection and a three phase traffic-actuated signal should be installed at the Tamalpais Drive/San Clemente Drive intersection. With these lane configurations and traffic controls, access to and from the site would operate at level of service "C". There may be a potential conflict problem for northbound U. S. 101 drivers who exit to eastbound Tamalpais Drive and seek access to the site. They would have to weave across one lane of eastbound Tamalpais Drive to reach the left turn pocket over a relatively short distance. If conflicts develop from this weave, then the movement could be restricted. Alternatively, vehicles could access the site by turning left at the San Clemente intersection and making another left into the site.

Alternatives 2, 3 and 5 consist of office, light industrial and mixed office/industrial uses respectively. They are discussed together because of their similar trip generation and distribution characteristics. Over

a day the alternatives generate between 2,280 and 2,990 vehicle trips and during the evening peak hour between 140 and 160 inbound and between 400 and 490 outbound trips. Also their trip distributions were determined to be approximately the same.

Table 14 presents PM peak hour levels of highway service for roadways that were deficient with respect to development of Marin Mall. The table indicates that even in 1985 with development of either Alternatives 2, 3, or 5 each would operate at levels of service between "C" and "D". This would allow satisfactory operation in all cases.

Capacity analysis performed for the Tamalpais Drive/U. S. 101 interchange for Alternatives 2, 3 and 5 implies that modification would not be required to the interchange. Its operation would not be significantly affected either now or in the future by development of either of the three alternatives.

To accommodate Alternatives 2, 3 or 5 Tamalpais Drive between the north-bound U. S. 101 on- and off-ramps and San Clemente Drive should be developed as specified in the previous section for Alternative 1. These improvements would provide level of service "C" operation and allow good access to the site.

Alternative 4, consisting of office, retail shopping, theatre and restaurant development, would generate the highest volume of peak hour and daily vehicular traffic of the alternatives tested and would account for 85 percent of the level of evening peak hour traffic projected for Marin Mall. In fact, capacity and operational analysis indicate that all of the highway and freeway mitigation measures recommended for Marin Mall would be required to mitigate the impact of Alternative 4.

Table 15 presents the PM peak hour levels of highway service for Alternative 4 and shows that the service levels would somewhat deteriorate

Table 14
PM PEAK HOUR LEVELS OF HIGHWAY SERVICE
Existing and 1985 Traffic Volumes
Alternative 2, 3 and 5 Site Uses

	<u>Exist.</u>	<u>Exist. + Alt.</u>	<u>1985</u>	<u>1985 + Alt.</u>
Fifer/Nellen/U.S. 101 Intersection	C	C	D	D
Nellen/Paradise Drive North/ Redwood Highway Intersection	C	C	C	C-D
Redwood Highway-Nellen to Industrial	C	C	D	D
Nellen-Fifer to Redwood Highway	C	C	C	C-D
U. S. 101/Tamalpais Interchange*	C-D	C-D	D	D

*Values shown are averages of critical locations.

Source: De Leuw, Cather & Company

Table 15
PM PEAK HOUR LEVELS OF HIGHWAY SERVICE
Existing and 1985 Traffic Volumes
Alternative 4 Site Use

	<u>Exist.</u>	<u>Exist. + Alt.</u>	<u>1985</u>	<u>1985 + Alt.</u>
Fifer/Nellen/U. S. 101 Intersection	C	C-D	D	F
Nellen/Paradise Drive North/Redwood Highway Intersection	C	D	C	F
Redwood Highway-Nellen to Industrial	C	C-D	D	E
Nellen-Fifer to Redwood Highway	C	D	C	D
U. S. 101/Tamalpais Interchange*	C-D	D	D	D-E

*Values shown are averages of critical locations.

Source: De Leuw, Cather & Company

for existing traffic conditions and would significantly deteriorate under 1985 traffic levels. The Tamalpais Drive/U. S. 101 Interchange would be significantly affected. The southbound U. S. 101 weaving section would go from its present level of service of "C-D" to "D" upon inception of Alternative 4, which would result in hazardous speed differentials between weaving and adjacent through traffic. Also, the merge-diverge points and sections along the Tamalpais Drive Interchange overcrossing would operate at level of service "D-E" in 1985 with this alternative site development. All recommendations strictly pertaining to Marin Mall that are summarized in Chapter V for highways and freeways would be required to mitigate the traffic impact of Alternative 4. Applicable pedestrian, transit and bicycle facilities discussed in Chapter V would also be appropriate to mitigate motor vehicle traffic impact.

Alternatives 6 and 7 consist of developed open space and "no build" respectively. The expected trip generation of Alternative 6 is very low, especially during the PM peak hour period, and the trip generation rate of the "no build" option is, of course, virtually zero. These alternatives, therefore, reflect existing and 1985 traffic conditions in terms of traffic impact. It is evident from previous analysis performed for existing traffic volumes that the existing levels of highway service are in the "C" or "C-D" range. The 1985 traffic volumes render levels of service "D" or better for all studied streets and highways that could be significantly impacted by development at the subject site. Therefore, no improvements appear to be warranted based on existing or 1985 traffic volumes on those streets for which improvements related to Marin Mall were developed.

There are two areas for improvement that should be considered to enhance local circulation regardless of actual study site development. The first is the short range improvement recommended for the Fifer Avenue/Neilen Avenue/ U. S. 101 Intersection as shown in Figure 8 and the second is

development of the new roadway south of and parallel to Tamalpais Drive connecting Paradise Drive South and San Clemente. The first recommendation would provide enhanced public safety at the intersection by reducing conflicts and the second would provide improved circulation for the local area south of Tamalpais Drive.

ADJACENT FIXED TRANSIT DEVELOPMENT

Plans for regional exclusive busway and fixed rail transit systems that would connect Marin County and San Francisco have included transit stations or bus stops in Corte Madera. The first report* prepared for the Golden Gate Bridge, Highway and Transportation District showed for rail transit alternatives a station located east of U. S. 101 just south of the Greenbrae freeway interchange, and for busway alternatives a bus stop located east of U. S. 101 just south of Tamalpais Drive. Both of these locations are close to the Marin Mall site and future development of fixed transit would have very significant impact on the adjacent street system depending on various factors and characteristics of the transit system. These factors include the choice of the transit system mode, either rail or bus; the success of the system in terms of patronage, capacity and operation; how it is affected by other transit such as ferry service; the development of the regional street and freeway system; the design of station access including factors such as roadway configuration, transit feeder service, number and quality of access points; and the internal design of the local station including provisions for all day and kiss-and-ride parking. All these factors could have an important effect on patronage and therefore

*Golden Gate Corridor Long Range Transportation Alternatives, Engineering Report, Kaiser Engineers, December, 1970.

on motor vehicle travel on the local street system. Station patronage could reach 1,000 during the peak hour and therefore require local highway improvements on a scale similar to those proposed for Marin Mall.

However, the development of new exclusive bus or rail transit systems in Marin County appears remote. The Golden Gate Bridge, Highway and Transportation District does not appear to be pursuing development of such a system and their recent report* to the state legislature did not include consideration of such a system within their future programs. Also UMTA, whose financing is often crucial to rapid transit system enterprises has recently laid down new guidelines for funding transit systems for metropolitan areas, such as Marin County, that indicate that such systems be used in part to shape urban development and growth. This concept is counter to current planning philosophy in Marin County. For these reasons development of an exclusive fixed guideway transit system in Marin County will probably not take place and transit emphasis in Marin County will continue to be placed on local and express bus and ferry service improvements.

*Golden Gate Corridor Transportation Plan, Phase II, September 1, 1975.

APPENDIX I

CONSTRUCTION COSTS

SIDEWALK ADJACENT TO EXISTING BRIDGE

For addition of a pedestrian walk or sidewalk on the north side of the existing Tamalpais Drive overcrossing, an order of magnitude cost estimate is from \$80,000 to \$160,000. The lower order of magnitude cost is for addition of the sidewalk by remodeling and extending the existing structure. A detailed analysis of the existing structure would be necessary to determine if remodeling is feasible. The higher order of magnitude cost is for a separate structure adjacent to the existing bridge. Construction of a separate sidewalk structure must take into account construction over the freeway and poor foundation conditions. Existing soft soil materials will necessitate deep piles for support. Construction over the freeway would be steel or precast concrete to minimize disruption to freeway traffic. Construction of piles in the median and adjacent to the freeway lanes would be required.

SEPARATE PEDESTRIAN STRUCTURE

The order of magnitude cost estimate for a separate pedestrian structure over the freeway to connect the two shopping center areas is from \$350,000 to \$480,000. The higher cost is for a covered walkway. Cost of separate stairs on each side of the freeway is included. Ramps to accommodate handicapped people are not included. Handicapped people would be accommodated by means of elevators in the stores on each side of the freeway.

The order of magnitude cost estimate for a mall 70 feet wide to accommodate pedestrian and stores is \$2,300,000 including \$875,000 for the store buildings.

Construction techniques noted above concerning poor and expensive foundation and construction over the freeway apply to this concept.

APPENDIX II

SOURCES OF INFORMATION

Meetings and/or discussions were held with representatives of the Town of Corte Madera, Golden Gate Bridge, Highway and Transportation District, Caltrans, and the Marin County Transit District to obtain current traffic and planning data, review existing facilities operation, and to discuss various transportation improvements. Additional traffic volume data were obtained from Marin County.

Burke, Nicolais and Archuleta developed the site plan, and previous traffic reports for the Marin Mall development have been prepared by Donald Frischer & Associates.

APPENDIX H

FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS
OF 1972: SECTION 404 EVALUATION

MARIN MALL REGIONAL SHOPPING CENTER

FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS
OF 1972: SECTION 404 EVALUATION*

I. Physical Effects (40 CFR 230.4-1 (a))

A. Potential destruction of wetlands-effects on (40 CFR 230.4-1 (a)
(1) (i-vi))

1. General habitat: The project site was historically tidal marsh. The site as it now exists can be divided into various habitat types. Table 14 of the Final Environmental Statement (FES) presents these graphically and also describes essential characteristics.

The 80-acre site is rectangular and contains three relatively different sections. The northernmost ± 35 acres is the lowest portion of the site. Its primary features are two ponds formed from diked salt marsh meanders. The water in the ponds is brackish with highly variable salinity due to flooding, leaching, and evaporation. Aquatic life includes microscopic organisms, insects, and stickleback fish. The ponds are used year-round by great blue heron and egrets and seasonally (winter) by waterfowl and shorebirds. A grassland area surrounds the ponds. Plant cover in the area is close to 100 percent and includes curly dock, prickly lettuce, coyote bush, and some salt grass. Resident wildlife species include gopher snakes, meadow mice, and black-tailed jack rabbits. This northern area is the land which the applicant has indicated he would offer as mitigation.

To the south of the pond area, and at a slightly higher elevation is the middle portion of the site which contains about 20 acres of grassland. The northern extent of the proposed shopping center complex would coincide with the northern limit of this area. Due to the high salt content of the soil, some vestiges of salt marsh remain in this area. The plant cover is close to 100 percent and included are thistle, curly dock, wild anise, prickly lettuce, salt grass, and pickleweed. In terms of wildlife this portion of the site serves primarily as a feeding area for various bird species and also serves as a nesting area for meadow mice, western meadowlarks, and savannah sparrows.

The southernmost ± 22 acres of the site have been in the process of being filled since 1968. Plant cover is about 80 percent, and includes bristly ox tongue, lupine, mustard, and plantain. Some terrestrial bird species feed and rest in this area, and black-tailed jack rabbits graze here.

*Evaluation factors are derived from 33 CFR 209.145 (e-g) and 40 CFR 230.3-230.5

Marin Mall: Section 404 Evaluation (Continued)

2. Natural Drainage Characteristics: The existing drainage at the site is described in paragraph 2.34 ff. Development of the southern portions of the site would alter present drainage patterns. The area of seasonal wetland to the north (the mitigation area) could receive increased sedimentation during construction and upon project completion. However, because most of the runoff would be directed into the man-made drainage channels (Plate 14), this impact would be minimized.
3. Sedimentation Patterns: Construction activity would result in a temporary increase in sedimentation in the seasonal wetland area. Project implementation would have minimal impact.
4. Storage Areas for Storm and Flood Waters: About 20 acres of former wetland used for temporary storage of excess storm water runoff with a capacity of 50 acre-feet would be lost, reducing total capacity of the area by 30 to 40 percent and making it impossible to impound a 24-hour, 50-year design storm.
5. Wave Action, Erosion or Storm Damage Protection: Wave action impacts are not applicable. Increased velocity of runoff could increase erosion. Storm damage protection would decrease for maximum episodes and the flood hazard for U.S. Highway 101 could increase. Consultants for the applicant, however, indicate that U.S. 101 and other adjacent areas would be protected (Coleman, 8 Nov 77).
6. Prime Natural Recharge Areas: Not applicable. The proposed activity would not affect the very minimal recharge value now possibly provided by the northern sector
7. Current Patterns: Not applicable. The site is not connected to a water body.
8. Flushing Characteristics: Not applicable. The site is not connected to a water body.
9. Salinity Distribution: Not applicable. The site is not connected to a water body. The degree of salinity for the northern ponds would continue to be variable.
10. Food Chain Production: Because the site is isolated from tidal action, the proposed activity would have a very minimal impact on the aquatic food chain of San Francisco Bay. The project would have a minor impact of the terrestrial food chain due to loss of an area which provides grazing for rodents and terrestrial birds and in turn serves as a raptor feeding area.

Marin Mall: Section 404 Evaluation (Continued)

11. Nesting, Spawning, and Rearing and Nesting Sites for Aquatic or Land Species: Table 15 lists animal species in and adjacent to the project site. Table 14 divides the site into a number of habitat types and categorizes each in terms of relative value as habitat and types of uses. The northern portion of the site, that which would only be indirectly affected, serves as a feeding area for a number of bird species including Great Blue Heron, Snowy Egret, American Coots, and Ruddy Ducks. This area also serves as a resting area for Buffleheads, Pintails, American Coots, and Pied-billed Grebe. The increased human activity in the shopping center area would at times have a disruptive effect on this northern area, but would not significantly affect its overall ecological value.

The central portion of the site is grassland which serves primarily as a feeding area for various terrestrial bird species including Short-eared Owls, White-tailed Kite, and Sparrow Hawks. The site is used as a nesting area for Western Meadowlarks, Savannah Sparrows, and Song Sparrows (refer to Table 14 for complete list). The southern portion of the site serves a very limited biological population with only one or two species using the area for feeding or resting. The proposed activity would eliminate the natural habitats of the central and southern portions of the site.

12. Areas Set Aside for Aquatic Environment Study, Sanctuaries, or Refuges: The nearby Heerdt Marsh (Corte Madera Ecological Preserve), Muzzi property, and Triangular Marsh (Plate 19) fit the category of ecological reserve/study area. These areas would not be directly impacted by the proposed activity. The introduction of urban water pollutants and sediments into the system could have some indirect adverse impact on these areas.
13. Cumulative Effects of Alterations: The primary effect would appear to be the change in the overall drainage pattern. The possibility of increased flooding and increased runoff velocities could have some adverse impact on the pond area to the north. A greater volume of water pollutants would be allowed to enter the drainage system.

B. Impact On Water Column (40 CFR 230.4-1 (a) (2))

1. Reduction in Light Transmission: The project would not have any direct impact on a water body. Increased turbidity at the storm water discharge point into the bay during periods of heavy runoff could have an occasional impact on light transmission.
2. Aesthetic Values: The appearance of the water in adjacent parts of the bay would only be impacted during periods of heavy runoff. The natural appearance of the site itself would be altered and view areas would be lost.

Marin Mall: Section 404 Evaluation (Continued)

3. Direct Destructive Effects on Nektonic and Plaktonic Populations: No direct effects. Indirect impacts may result due to pollutants introduced into the waterway because of use of the shopping center.

C. Covering of Benthic Communities (40 CFR 230.4-1 (a) (3))

1. Actual Covering of Benthic Communities: Not applicable. The proposed activity would not involve placing fill in a waterway.
2. Changes in Community Structure of Function: Not applicable. The impact on benthic communities would be limited to minimal secondary impacts resulting from the introduction of some additional pollutants and sediments into the waterway.

D. Other Effects (40 CFR 230.4-1 (a))

1. Changes in Bottom Geometry and Substrate Composition: The filling and construction activity would occur on reclaimed land behind dikes and, therefore, the proposed activity would not have any direct impact on San Francisco Bay or any other waterway.
2. Water Circulation: The filling and construction activity would occur on reclaimed land behind dikes and, therefore, the proposed activity would not have any direct impact on San Francisco Bay or any other waterway.
3. Salinity Gradients: The filling and construction activity would occur on reclaimed land behind dikes and, therefore, the proposed activity would not have any direct impact on San Francisco Bay or any other waterway.
4. Exchange of Constituents Between Sediments and Overlying Water with Alterations of Biological Communities: Because the proposed activity would be carried out on reclaimed land behind dikes, this impact is not applicable to the Bay. The ponds in the northern portion of the site would not be impacted because willing or dredging would not occur in them.

II. Chemical - Biological Interactive Effects (40 CFR 230.4-1 (b))

- A. Water Column Effects of Chemical Constituents (40 CFR 230.4-1 (6)(2))
Fill will not be placed in any waterway. Construction and implementation of the proposed activity would result in the creation of a new source of urban runoff. Storm water could be a mechanism for allowing these to enter the waterway. The California Regional Water Quality Board has required that the project's storm drainage system shall be used to discharge clean storm water runoff only (Appendix A, Document A-26).

Marin Mall: Section 404 Evaluation (Continued)

- B. Effects of Chemical Constituents on Benthos (40 CFR 230.4-1 (6)(3))
See item "A" above. The same information applies here.

III. State Water Quality Standards (40 CFR 230.4-2)

The California Regional Water Quality Control Board has indicated that Water Quality Certification of the subject project will not be required. However, the Board does require compliance with certain conditions as listed in Document A-26. Included in these are requirements concerning the handling of construction materials and the treatment of wastewater resulting from construction.

IV. Selection of Disposal Sites (40 CFR 230.5)

The proposed activity does not involve the use of a disposal site.

V. Public Participation and Coordination (33 CFR 209.145 (f & g))

Section 9.00 of the Final Environmental Statement provides this information.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER (For) Public Notice No. 11101-47	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) FINAL ENVIRONMENTAL STATEMENT: HAHN SHOPPING CENTER (MARIN MALL REGIONAL SHOPPING CENTER)		5. TYPE OF REPORT & PERIOD COVERED Final Environmental Statement Dated AUG. 78 (Permit Action)
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Permit Impact Assessment Section Environmental Branch San Francisco District, U.S. COE		8. CONTRACT OR GRANT NUMBER(s) N/A
9. PERFORMING ORGANIZATION NAME AND ADDRESS Environmental Branch, San Francisco Dist. (SPNED-E) U.S. Army COE, 211 Main St, SF, 94105		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Permit Action
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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) N/A		
18. SUPPLEMENTARY NOTES N/A		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Hahn, Inc., has applied to the Corps for a Permit to construct the subject shopping center in Corte Madera, California. The subject document was prepared for this permit action.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The applicant intends to construct the subject shopping center in Corte Madera, California, at a point just east of U.S. Highway 101, at the Tamalpais Rd. interchange. The Draft Environmental Statement was released in 1974 and a Proposed Final Environmental Statement was released in May 1977. The comment period on the Final document ends on 25 September 1978.		